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A Course of Lectures ON THE NATURE AND TREATMENT OF DEFORMITIES.

DELIVERED AT THE ROYAL ORTHOPÆDIC HOSPITAL, MAY 1860.

BY

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LECTURE II (*concluded from page* 516).

TALIPES EQUINUS.

THE next condition is one, the real cause of which is totally unknown to us. Suddenly, without any apparent illness before or afterwards, *a child is deprived of the use of one or both extremities, sometimes of the whole of them.* Numerous cases have presented themselves, the history of which is as follows: The child went to bed in perfect health, passed a good night, but on being taken up in the morning, was found to have lost the use of one or both lower extremities; upon partial recovery from which, contraction of the gastrocnemius remained. That there is some organic affection of the spinal marrow or its membranes in these cases, is more than probable; and I believe that, if opportunities were presented of careful examination with the assistance of the microscope, it might be discovered.

Upon one occasion, I was consulted by a lady, 22 years of age, who had been attacked eleven years previously with contraction of both elbow-joints at right angles, and of both the gastrocnemii muscles. Her mother stated, not only that she enjoyed good health at the time, but that she had always possessed good health both before and since the attack. In this instance, there was not complete loss of power in any of the muscles, so that the mischief existed in a less degree. In other instances—in healthy labourers, for example—a gradual lameness comes on from contraction of the gastrocnemius muscle, without paralysis, or any apparent interference with the voluntary efforts, the health remaining uninterruptedly good. We are therefore evidently in great ignorance upon this subject; and when we consider that the contraction itself was but a few years since, comparatively speaking, regarded as incurable by the leading members of our profession, we have reason to hope that, having arrived at a successful mode of treatment, the cause may yet be discovered.

There is another cause with which I have met; viz., *Fracture of the Tibia low down.* One patient was aged 40 years, and another was 60 years of age. In both these, the contraction had evidently taken place during the treatment of the fracture. The first case, which had existed four years, had become permanent from want of exercise of the joint; and in the other, the same result would in all probability have followed if sufficient time had elapsed. I divided the tendo Achillis in the former case, and restored motion. The latter having only existed ten or twelve months, by the use of the Scarpa's shoe the contraction was overcome, and voluntary motion restored.

In all cases, from whatever cause they arise, a greater or less amount of atrophy of the affected limb will be found to exist, owing to the necessarily passive state of the joint. In the paralytic cases, there is a total absence of development; those muscles which are paralysed degenerating into a sort of fatty substance, whilst those which are contracted suffer from the absence of exercise.

In those cases in which paralysis exists, of course any after development or increase in the size of the limb is out of the question; but in those in which the muscles retain their functions after the removal of the contraction and restoration of the motion of the joint, the muscles, by proper exercise, will increase in development. Two patients, 38 years old, who had suffered from this deformity from their childhood, and upon whom I operated more than fourteen years since, now possess increased development and perfect power over all the muscles, having had no assistance or support to the joint after the first few months following the treatment.

There are other cases which, strictly speaking, are simply talipes equinus, where the deformity is considerably aggravated in appearance, without much additional resistance or obstacle to the treatment. (Figs. 3 and 4.) These cases result from

Fig. 3.

Paralysis of the whole of the Muscles situated in the front part of the Leg, connected at the onset with paralysis of the entire extremity. When, upon partial recovery, the patient begins to use the limb, the toes of the foot, which is completely extended (as seen in Fig. 1), are slightly flexed from the loss of power in the extensors; and these being subjected to pressure on their superior anterior surface by the weight of the body in walking, the foot, from having no support excepting that derived from the ligaments and the tendo Achillis, deviates to one side or the other, generally inwards. By degrees, the ligaments, as in every case where they are subjected to undue pressure, become stretched, giving rise to further deviation, which adds considerably to the deformed appearance of the foot (see Fig. 4); the patient walking at last upon the outer

Fig. 4.

and upper surface of the foot, as in complete talipes varus; and there are instances of complete reversal of the anterior half of the foot—the toes pointing backwards, the sole upwards, and the patient walking upon the dorsum of the foot, as

seen in Fig. 3. The muscles do not of necessity—at least, but seldom—present any obstacle to the restoration of the natural position of the foot, beyond the contracted gastrocnemius.

The ligaments in these, as in all paralytic cases, partake of the general debility, and offer but little resistance to a change of position. We have had patients from thirty to forty years of age, who had suffered since infancy from this deformity in the above severe forms, yet have had their feet restored to the normal position with the power of walking in comfort with the assistance of mechanical supports attached to their boots.

Contraction of the Gastrocnemius in the slightest form—viz., that in which the foot is at a right angle, the patient being able to stand flat upon it—must be regarded as an incomplete form of talipes equinus. Even this is a serious inconvenience, as the pressure of the weight of the body is thrown upon the anterior inferior extremity of the metatarsal bone, giving rise to corns and other annoyances, such as a sudden deviation of the foot to either side when any inequality of surface is trodden upon. The weight is then thrown on one or other of the lateral ligaments, which occasions severe pain, preventing at times the use of the foot for twenty-four hours. The ligaments become weakened by this succession of sudden strains, and remain in a stretched condition, which of course produces greater liability to a recurrence of the casualty.

Contraction of the great toe is commonly a sign of contraction of the gastrocnemius at right angles, especially in the adult, as shewn in Fig. 5. It arises from the extensor muscles being instinctively brought into action to assist the flexors of the foot to bend the joint—a secondary effect, which, it will be seen, cannot be produced until the toe is extended.

Fig. 5.

Symptoms. The natural temperature of the limb is reduced in all cases, but more especially in those connected with paralysis. The passive condition of any joint or extremity predisposes the limb to a reduction of the natural temperature. Many suffer severely from chilblains during the winter. One case upon which I operated some years since, had for two years an open wound extending completely across the front part of the foot, produced through this inability to preserve the natural temperature, which cicatrised perfectly in three weeks, without any other application than simply wrapping the foot in sheets of wadding. I have a patient now in the Hospital with paralytic talipes equinus, of a severe form (precisely resembling Fig. 4), affecting both feet, who had open wounds upon both ankles for upwards of four months. Stimulants and ointments, the girl states, had been constantly applied by medical advice, without any benefit, the ulcer remaining in its sluggish, unhealthy state, without any attempt at cicatrisation. The simple application of sheets of wadding and warm covering sufficed in this, as it will in all similar instances, to effect perfect cicatrisation in less than three weeks.

It has been asserted by some writers upon this subject, that an alteration at times takes place in the relative size or proportion of the astragalus and its articular cavity. I do not believe that this ever happens. The resistance offered in old cases to the return of the astragalus within its articular cavity, is owing more to the absence of the secretion of the synovial membrane and to the rigidity of the ligament. In not one instance have I seen a failure in the attempt to remove the deformity, although I have had to treat these cases in patients upwards of fifty years old. This could not be if the astragalus were too large or the articular cavity too small.

Treatment. The treatment is the next consideration; and although this is, as I have stated to you, one of the most simple forms of contraction, yet there are points which will demand your careful attention.

In all cases in which there is decided contraction of the gastrocnemius, although it will admit of flexion to a right angle my advice is that the tendon should be divided. Attention must, however, be directed to the cause of the deformity, its duration, and the age and constitution of the patient.

In cases which have arisen from the three first named causes, and in which there has been, or may be at the time, a loss of power, with complete paralysis of one or more muscles, there will be found no resistance in the joint itself, the deformity being maintained solely by the contraction of the muscle. You will therefore at once perceive that, if the patient is young and of delicate constitution, the division of the tendo Achillis will admit of the foot being placed in any position without difficulty; and if the foot is at once or within a few days flexed, there is great danger of producing an irremediable deformity—viz., talipes calcaneus or talipes calcaneo-valgus. I have been applied to in cases in which this deformity had been thus produced. The uniting medium, having been too rapidly stretched, had lost its power of recontraction, and a permanently elongated tendon was the result; so that, although the muscle retained its functions, yet, before it could act on the os calcis, it contracted fully upon itself. The heel thus loses its support, and one or other of the above mentioned deformities is produced.

I must caution you against a practice which is now being recommended; viz., that of dividing the tendons, and immediately placing the foot or joint in position. It is a violation of all principles of treatment, and must be followed at times by irremediable consequences.

To preserve the uniting medium in slight cases, and to render the tendon available hereafter, a slow extension must be adopted; and in the paralytic cases there is always considerable weakness existing for three or four months after the operation. In consequence, as I imagine, of this, it has been the practice of some to avoid the operation in slight cases. I find, however, with the precaution I adopt, not only that the operation is not injurious, but that it is the only mode by which relief can be obtained.

The manner of performing the operation is as follows:—Let the patient lie on the abdomen; an assistant grasps the knee of the leg to be operated upon with one hand, and the foot with the other, the leg being kept extended; direct him forcibly and steadily to flex the foot, so that the tendo Achillis, upon which you are about to operate, is kept at the full stretch; then introduce, about an inch and a half or two inches above the os calcis, a small sharp-pointed knife, pass it horizontally beneath the tendon, turn the sharp edge of the knife towards the tendon, and, by gently pressing the tendon upon the edge of the knife with the thumb or finger of your left hand, gradually divide it from below upwards, and the moment the tendon is divided, let the assistant hold the foot in the full extended position, that the divided ends may be kept as closely as possible in juxtaposition. A piece of lint and strapping must then be applied over the puncture, the foot carefully bandaged from the toes; two splints, either of gutta percha or tin softly padded, being applied one in the front, and the other on one side of the foot, retained in their position by the bandage, and holding the foot in the full extended position. The leg should be kept at rest in the horizontal posture, and be carefully wrapped up in wadding and flannel to preserve the natural temperature; the ordinary diet should not be interfered with; and the only caution to be given to the patient is, that during any movement the leg should be held in the horizontal position, for the first few days. In the course of from four to seven days, you commence your extension, provided the puncture is healed. The best instrument is the Scarpa's shoe, with the single or the double action cog wheel (Fig. 6), which I have used for many years. After removing the splints and strapping, let the foot be rebandaged with flannel, the Scarpa's shoe be screwed to an angle precisely corresponding with the position of the foot, which is then to be placed in the instrument and secured by the ankle and instep straps, *avoiding pain and undue pressure.* You then proceed with your extension, in slight cases, slowly; occupying at least fourteen days in bringing the foot to a right angle, and as many more in gaining the full flexed position. The patient may then be allowed to move about and use the foot moderately in the instrument, which must not be removed for six weeks from the time of the operation, when an ordinary boot may be used in those cases in which there is no paralysis or lateral deviation: but in cases where these conditions exist, a boot with iron support attached to each side (Fig. 7), with stop-joint, to prevent extension beyond a right angle in paralytic cases, must be worn for a longer or shorter period, according to the strength

gained. I use the double iron, in order that the foot may be supported on either side, as the tendency to deviation may and does alternate in paralytic cases. In some cases, where there had been perfect paralysis of the anterior tibial muscle, the patient has, in the course of a few years, gained sufficient strength in the ligaments to dispense with support for all ordinary exercise.

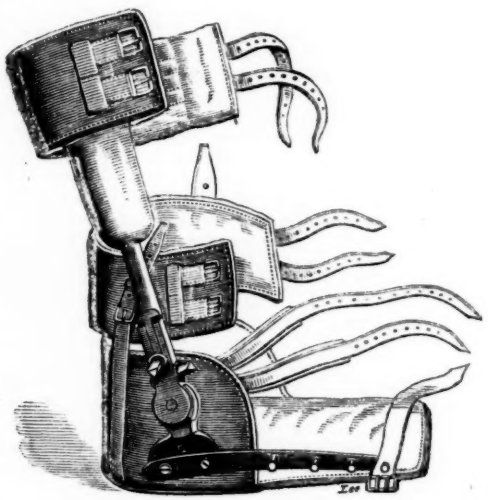

Fig. 6.

Many cases of this kind have been successfully treated, the patients retaining the full power in the gastrocnemius, although they had shewn the greatest possible weakness immediately after the treatment, the joints appearing almost unattached.

Fig. 7.

Care must be taken to preserve the natural temperature of the limb in all these cases, or the healing of the puncture and union of the tendon will certainly be retarded, and even prevented. With only ordinary covering, the temperature will be below the natural and healthy standard, and the restorative process cannot go on. A medical gentleman divided the tendo Achillis for talipes equinus, and, with the view of preventing inflammation, applied cold lotions over and around the puncture. After fourteen days, he found the puncture still open, and no attempt at union. He wrote and informed me of the particulars. I advised him to wrap the foot and leg in flannel, etc., and keep the limb at rest. In four or five days, perfect union took place, and he proceeded with his extension, which must in no case be commenced until the puncture is healed.

My reason for advising the operation in these slight cases is, that I have never seen the use of the joint restored without it. Patients have applied to me after having been treated mechanically for years, and by some who are considered authorities upon this subject, with strict injunctions never to allow an operation to be performed, as its only result would be increased lameness. I have operated in these cases, and have had the satisfaction of seeing the patient walk, with the free use of the joint, in six or seven weeks, with the assistance, of course, of support to the ankle, which they were required to wear for some months afterwards.

In cases which have arisen from rheumatism, there is no fear of your proceeding too rapidly. The difficulty with which you will have to contend is the very reverse, namely, an impossibility to proceed with the flexion of the joint as quickly as could be desired, during the time when the uniting medium is soft and elastic. There is always, in these cases, more or less thickening of the synovial membrane and parts surrounding the joint, which renders it very difficult to extend the astragalus to its proper position in the articular cavity, and this difficulty is greatly increased by the pain occasioned at each alteration of the position of the astragalus, however slight. It, therefore, requires great resolution on the part of the patient, as well as perseverance on the part of the medical attendant. By steadily continued extension, however, the treatment may be borne without interruption to the general health.

In adult cases, which have existed many years, pain always attends a change of the position of the foot. This will not, however, offer an obstacle to the treatment, excepting in the rheumatic cases just alluded to. You must at all times be guided by the feelings of the patient, and it is better to progress slowly and certainly, than to attempt to proceed rapidly, and find yourself obliged to intermit the treatment. In some cases of confirmed talipes equinus, which present no lateral deviation before the operation, you will find that, as you flex the foot, lateral deviation will take place, most commonly to the outer side —rarely to the inner. This is owing to the contraction of the peronei muscles on the one hand, or the posterior tibial on the other, and is frequently not perceived until you have brought the foot to nearly a right angle with the leg. It is better then to intermit the treatment, to divide the peronei or posterior tibial, as the case may be, and in three or four days resume the treatment; otherwise the patient, when beginning to walk, will be thrown either on the inner side of the metatarsal bone of the great-toe, or on the outer edge of the fifth metatarsal bone, occasioning him great pain and inconvenience. In no case must you rest satisfied with the simple removal of the deformity, but the foot must be flexed to nearly its fullest extent, or a second operation will be necessary; and in severe cases the patient must wear the instrument night and day, in order to prevent the tendency to recontraction; for, from my observation, the cicatrix does not resolve itself into the permanent condition in less than six months.

The increase of the arch of the foot, and the contraction of the toes, the great toe especially (Fig. 5), will most commonly yield to the steady and continued pressure which ought to be maintained by the straps passing over the instep. In old cases, however, it is sometimes necessary to divide the *flexor* tendons of the toes.

Contraction of the arch of the foot is seldom met with, except in connection with contraction of the tendo Achillis, paralysis of the gastrocnemius, or congenital cases of contraction. It is well for you to bear this in mind, in slight cases, for I have lately seen the plantar fascia divided *simply* for this deformity—the cause, namely, slight contraction of the gastrocnemius, being entirely overlooked. Division of the plantar fascia is unnecessary, except in very few instances, and those only old cases.

SMALL-POX AND VACCINATION HOSPITAL. A general court of the governors of this institution was held a few days ago. Since the foundation of the hospital, in 1746, it has afforded relief to 273,699 patients; during the year 1859, to 1,185; and during the past six months, to 669—being the greatest number admitted for a similar time since its institution. A tender has been accepted for building two additional wards to the hospital for the sum of £3,358, and these wards are to be proceeded with at once. 147,734 persons have been vaccinated at the hospital since the year 1799, and 197 during the last six months; and 120 medical practitioners have been supplied gratuitously with 600 charges of vaccine lymph since the commencement of the present year.

Illustrations
OF
HOSPITAL PRACTICE:
METROPOLITAN AND PROVINCIAL.

BIRMINGHAM GENERAL HOSPITAL.

CASES OF EPILEPSY.

Under the care of J. Russell, M.D.

[*Clinical Clerks*—Messrs. May, Savage, and Harvey.]

[*Concluded from page* 495.]

The result of my hospital experience confirms the opinion that epilepsy commences more frequently before the age of puberty. In nineteen patients, the first attack commenced at fourteen years of age and under; in thirteen, after that age. Of these nineteen patients, four have suffered from the fits from the period of dentition, three of them are now at an age varying from fifteen to twenty-one; of eight others, of whom inquiry was made, in two the patients had had fits whilst cutting their teeth, in six they had not. I may add another case, in which a young lady, who died of the worst form of epilepsy at twenty-six, dated her disease, in uninterrupted succession, from childhood.

A comparison of the cause in those cases of epilepsy which commenced in childhood, and in those originating at a later period, would be attended with much interest; my materials are, however, too scanty to afford any definite conclusions. Comparing the group of twenty cases, just spoken of, with one of thirty-two cases, which I have noted, in which the first attack occurred after puberty, the following results appear. Of the twenty cases, in five the disease dated from dentition, or from early childhood; of the remaining fifteen, a strong congenital tendency to epilepsy was evinced in nine, by single convulsive attacks in early years, or in the history of other members of the family; in two fright was the immediate cause, and in one fright preceded the development of the disease by two years; in three no cause was apparent. Worms had not been observed in any of the children. With these we may compare the thirty-two adult cases of epilepsy: fright or anxiety was the cause in nine; in one, however, the influence of anxiety was attended with some doubt, and in another the fright, which was very great, preceded the fits by two years; intemperance was the undoubted cause in seven, combined in one with anxiety, in another with intestinal irritation; intemperance was also the probable cause in two others; seven cases were associated with constitutional states, struma, hæmorrhage, amenorrhœa, debility, or anæmia; two patients owed their malady to masturbation or seminal discharge; and one probably to exposure to the sun; four cases were unexplained.

To the former of the two groups, I may add a case mentioned to me by my friend Dr. Keyworth, in which epilepsy was induced in a boy by excessive and sustained mental application; and it was highly significant of the cause of his malady that, in the sleep which followed the fits, he talked of the object of his labours.

Among the cases in adults which were attributable to special states of constitution, is one which resulted from exhaustion, and presented some peculiar features. I have alluded, on the former occasion, to the influence of depraved nutrition of the brain in inducing the epileptic state; this case manifested the influence in a singular manner.

Case xii. Thos. Hughes, aged 23, was reduced to a state of extreme anæmia, by discharges of blood from his rectum, constantly repeated during four years. For some time he had been subject to fits having the character of prolonged epilepsy; but these fits only occurred when the hæmorrhage was arrested by any means. He was then seized with vomiting, which continued for an hour or two, when he became insensible; the insensibility usually lasted two days, during which period he took no food unless by force, and vomiting recurred frequently; he was not convulsed, but ground his teeth if disturbed; he tossed about in bed, throwing his arms about, and not infrequently rolled out of bed. His pupils were rather dilated; his urine was passed involuntarily. The attack was sometimes followed by dulness for a week.

One of the cases of masturbation also presented some very remarkable characters. I cannot doubt that the influence of this miserable habit in producing epilepsy, so strongly insisted on by Dr. Watson, is to be referred to the often repeated condition of intense excitement into which the nervous system is thrown; and this influence is often exaggerated by the fears instilled into the minds of the patients by the unprincipled adventurers who make such unfortunate sufferers their prey.

Case xiii. I first became acquainted with the patient in consequence of the alarm excited in his mind by some of the infamous publications to which I have alluded. He proposed to consult the writer of them. I firmly believe that I succeeded in inducing him to reform his conduct. About ten months afterwards he called upon me, and gave me an account of two attacks which had happened to him. The first was plainly a fit of epileptic vertigo; followed, however, by a true epileptic fit. The second attack occurred when he was abroad; he was seized with "a vision", under the influence of which he felt impelled to return immediately to his lodgings. He then fancied himself under a divine command to burn some papers of a religious tendency which he had been translating, and at which he had laboured with injurious assiduity; he remembers holding his hand in the flame, as a punishment for what he had done. Afterwards he felt enjoined to destroy himself, and inflicted three wounds in his throat; and then he lost consciousness. He was conveyed to a hospital; and a letter written by the medical officer confirmed the accuracy of the patient's statement: it further informed me that he had repeated convulsive fits for three or four days. During his passage home, he had once a tendency to return of confusion of mind; but he immediately went on deck, and, by diverting his mind, speedily got rid of the unpleasant sensation.

The case affords a very striking example of epileptic mania. I have notes of two or three other cases of this form of the disease, but of a far less characteristic nature.

Cases of epilepsy occasioned by intemperance are not necessarily associated with other symptoms of cerebral disease. In some persons, especially when the vicious indulgence in fermented liquors has depraved the nutrition of the brain, alcohol seems to act as a direct poison, and to produce immediately an epileptic fit. Two cases have lately been mentioned to me, in which a debauch was uniformly followed by an attack of epilepsy; and the same circumstance occurred in three of the cases in the above group.

Case xiv. Wm. Bryan, aged 30, shoemaker, formerly a soldier, had been in the habit of "drinking very heavy when at it". He was very tipsy during the two days preceding his admission. Our informant, who had been acquainted with the patient twelve or eighteen months, was aware of his having had one fit about a month previously. The night before his admission, he fell into a series of fits, being sensible between them, and very boisterous; he did not bite his tongue. After his admission, he had several mild attacks, consisting of snatching of his limbs, and snapping with his teeth; he was dull, but could be induced to answer. His pupils were moderately contracted. On the following day, he was perfectly conscious, though still torpid. He had not passed urine, as it appeared, since his admission, though the evidence touching the night rested upon his own testimony; a catheter was introduced, and more than a pint of urine was drawn off; it had a specific gravity of 1022, was free from albumen, and presented no abnormal appearance under the microscope. From that time the patient rapidly recovered, though without any recollection of what had happened to him.

But in two other cases the epilepsy was but the associate of other symptoms of serious disease of the brain.

Case xv. Thos. Bowyer, aged 35, cabman; has been habitually intemperate. He met with an injury to his head four years ago. He has suffered from severe pain at the top of his head for five months. For six weeks the headache has been increased; he had vomiting in the morning, vertigo, and difficulty in walking; he was then attacked with epilepsy. His sense of sight and of hearing became impaired. During his brief residence in the hospital, he became delirious and very troublesome, and manifested symptoms of general paralysis; his muscular power was impaired, and he passed his urine involuntarily. His urine was loaded with stellæ of triple phosphate. The fits continued to recur, and he was sent into the asylum, where, as we afterwards heard, he died the next day.

Case xvi. Jos. Turrel, aged 42, maltster; has drank a good deal of beer and ale. Fourteen months ago, he felt a sudden "snap" in the back of his head, and nearly fell; he became a little giddy afterwards. This attack was followed, speedily, by

one or two attacks of chilliness and drowsiness. Soon after he suddenly fell, he "hooted out for help", and then became unconscious for a moment, but recovered, and felt a shaking all over him; and bad pain remained in his head, chiefly at the occiput and vertex. Fifteen weeks afterwards, as he was just beginning to mount a ladder, his *right* leg suddenly failed, as though it were drawn by some one; "it pulled him right down", without his retaining the least power to help himself. He again lost his senses, and cried out; he felt his face and jaw twisted, but did not bite his tongue. Four weeks after, a third fit occurred, and then their recurrence was established, and sometimes seven or eight have happened in one day, followed, however, by a fortnight's immunity. The third fit left a weakness in the *right* leg, which speedily increased, and compelled him to give up work. The fits are never followed by sleep; they do not uniformly deprive him of consciousness; in two, each of five hours' duration, he retained his senses throughout. The *right* leg and arm are painfully contracted; the *left* side is never affected. At the time of my seeing him, he had constant pain in his head; his mental functions were unaffected. The muscular power was failing in his limbs, but chiefly in those of the *right* side, so that he could not walk without aid; sometimes the legs started as he sat; the nutrition of the muscles was not affected; he spoke rather slowly; his pupils were small. Before the fits control over his bladder became somewhat weakened; the urine was normal. During my attendance, the left side of the body became affected in the fits. It was not difficult to foresee the issue of this case in general paralysis.

I suspect that in all cases of epilepsy produced by intemperance, the nutrition of the brain is first profoundly impaired by the protracted operation of the poison; just as in cases of Bright's disease of the kidney, and of poisoning by lead, the epileptic convulsions do not usually happen until, in the advanced stage of the disease, the nutrition of the brain has been considerably lowered. In some cases, this condition of the brain acts only as a predisposing cause of epilepsy, exposing the organ to suffer from any occasional irritation propagated from remote organs. It was so in the following case:—

CASE XVII. I was called, on September 20, to a fine, well-made young man, of intemperate habits, who had been suddenly seized with epileptic fits. He had lain perfectly insensible for eight hours, and at short intervals his body was agitated by a violent attack of convulsion, which affected sometimes one side of the body, sometimes the other. There was no spasm of the glottis. He cried out piteously in the fits, and reared himself up, showing that insensibility was not complete; his body was bathed in perspiration; pulse, between the fits, 156. He passed urine unconsciously. He had never had a fit before. On the 17th and 18th, he had suffered from a severe attack of cholera, which was checked on the 18th; next day, he indulged in a dinner of three mutton chops and porter. I found that leeches had been applied without relief. I ordered a copious purgative enema; it acted in an hour, when he had become more conscious, and got out of bed. He passed a very large unhealthy evacuation, and whilst passing it fell into another fit, from which he recovered with perfect consciousness, though in entire ignorance of all that had happened; from that time he rapidly recovered, excepting that for some time he complained of weakness of one arm. It was significant of the origin of his fits, in intestinal irritation, that on the same night he passed two other stools, and that on each occasion the action of the bowels caused slight twitching of the muscles.

It appears highly probable that the explanation of the fits in this case applies generally to what is termed the eccentric form of epilepsy, and also to the convulsions of children, occasioned by dentition, by worms, by irritating matters in the bowels, etc.; that an abnormal condition of the brain, induced by various circumstances, in children, especially by cachexia, or by improper feeding, is the most potent cause; the distant irritation acting in a subordinate capacity. And a similar explanation would apply to those cases of the disease in which tumours or tubercular concretions are found within the skull; the part acted by the tumour in the malady being a secondary one. Even in syphilitic disease of the dura mater, the amount of organic change met with in the membranes is regarded by Dr. Todd as inadequate to account for the serious epileptic attacks, and other equally grave symptoms, from which the patient may have suffered; and he is obliged to have recourse to the syphilitic poison for an explanation of the phenomena.

With respect to the effect produced by the disease upon the mental and nervous constitution of the patient, a large number of facts would be necessary to establish any rule. Some change is observed in almost all of my patients. It is obvious that there are many circumstances which require attention in that inquiry besides the fits themselves. Thus, in the adult, the altered state of the brain must often be referred to the original cause of the fits, rather than to the fits themselves. Habits of intemperance, prolonged anxiety, cachexia, anæmia, or debility, will of themselves enfeeble the nervous power and pervert the nervous functions, and thus the epileptic fit will often be only one of a series of phenomena which mark the prolonged operation of some injurious influence.

Even in children, who are less exposed to the operation of external influences than adults, peculiarity of nervous constitution, or inherited tendency, will often of themselves induce a wide departure from the normal standard of mental health, and must exert a most powerful influence in preparing the nervous centres to suffer from the occurrence of the fits. Thus, among my cases in children, they who have suffered from the disease since the period of dentition, for fifteen or twenty years, are by no means those who manifest the greatest change in the functions of the nervous system, although in one case, at least, the fits were of the graver character. The influence of hereditary tendency is most evident in the epileptic family, the different members of which exhibit the earliest failure in mental power, and the greatest alteration in their nervous constitution; in the eldest boy the disease is rapidly producing its worst consequences, and those members not yet attacked with fits have nevertheless manifested a serious amount of infirmity.

It is rather remarkable that in the group of children, the patient who has suffered the longest (excepting those affected since dentition) exhibits the mildest effects. On the other hand, in Case IV., in which the fits have been present for two years, the boy has become so sensitive that if his mother "beats him, or even taps him on the head", he falls into a fit; and the sudden shutting of a window startled him so, that he clung to his mother, "as though he did not know where he was".

It certainly appears that the more severe fits produce greater change in the sufferer than the milder ones, although this rule is liable to exceptions. That the small fits affect the brain to a considerable extent is evident from the sopor by which they are often followed. Case VI. illustrates the mischievous consequences of a rapid succession of attacks, and other illustrations are sometimes afforded in the temporary change manifest in the patient, whose last visit has been preceded by a series of attacks; the patient, however, generally regains his former condition after a short interval.

On the subject of treatment, I regret that I have little information to offer. The number of cases which afford any trustworthy data is comparatively small, when I have deducted those patients in whom only one or two fits had occurred (amounting to six), those in whom the malady was accompanied by evidence of other disease (three), and the still larger number who did not remain under notice a sufficiently long period to allow any plan of treatment to be tested.

I may state that in most of the cases, the condition of the heart and of the urine was carefully investigated.

In thirteen cases the existence of worms was investigated, by the aid either of turpentine or of the oil of male fern; in one only (case VI) were any worms discharged. In this patient a tape-worm, apparently extending nearly to the head, was voided, but without effecting any improvement in the patient's condition.

A seton or an issue was inserted in five patients: one, who speedily passed from under my notice, had a succession of fits three weeks afterwards; another manifested no improvement, but the length of time the issue remained open is not stated; in two, the remedy was continued for three months, but the disease advanced steadily. In the fifth case, the seton was worn for seven months; the man had suffered through nine years, from a fit every month or six weeks. The introduction of the seton was followed, in three weeks, by three fits in rapid succession, after which he looked, and expressed himself as feeling, greatly relieved. He then passed six months without a fit, when one of a milder character occurred. Again six weeks of freedom followed, and he then insisted on having his seton removed. There was nothing in the nature of the case which would explain the benefit apparently conferred by the seton, excepting that the patient was a rather robust man. It is unsafe to dogmatise where we have so little knowledge; but the class of epileptic cases in which setons or issues seem to promise the best effects, are those occurring in robust sub-

jects, and especially in patients of full habit; cases particularly which are associated with antecedent pain in the head, or with evidence of fulness of the brain, or of impurity of blood, induced by vicious habits, especially by excess in drinking or in eating.

I did not find any benefit from blisters in five cases, though in two they were kept open.

The inhalation of chloroform was employed in six cases. Generally, it was borne well: in one case, indeed, in which the injurious effects of the disease were very clearly developed, the patient declared that he felt better for the inhalation. One patient however, a young lady, whose nervous power was much lowered, was quite intolerant of the operation of the chloroform. The remedy failed to prevent the recurrence of the fits after the interval of a day or two; and in two instances the sufferer fell into a fit shortly after having been under its influence.

I have employed morphia and opium to check the spasmodic action of the muscles, from which some of the patients were suffering, but without success; nor did I gain any assistance from blisters. In Case XI, in which these "jerks" were so prominent a symptom, I first employed the inhalation of chloroform. As the "jerks" occurred each morning, chloroform was inhaled for a succession of nights, but without any marked effect upon the next morning's attack. I then administered three grains and a half of the compound soap pill three times a day, and continued it with a short intermission for more than two months, but no permanent benefit was obtained.

Tonics were the remedy which seemed to be indicated in a large proportion of the cases; and the indication was stronger in the minor attacks, from the analogy they presented to the state of syncope. Nevertheless, I have not met with success from remedies of this class. I have chiefly employed the phosphate of iron, sometimes in combination with cod-liver oil and the phosphoric acid. One patient took these medicines for seven, another for five months, the disease and its consequences steadily advancing throughout the period. To two others the remedies were administered for three months with no better effect, and to others for a shorter period. In only two cases can I report any marked improvement. In a young lady, who had suffered from epileptic fits of the most severe character for five years, evident, and I believe, permanent amendment took place under the use of tonics. In Case XI, the girl had been affected with fits for eighteen months, at the rate of one in a month. She was in an anæmic condition, and was suffering under considerable mental depression. She remained in the Hospital sixteen weeks. She had one fit ten weeks after the preceding one; and has since continued under our notice nine weeks, without a repetition; but throughout she remained liable to the spasmodic attacks. The medicine administered was arsenic, raised to doses of ten minims of Fowler's solution, and subsequently steel. Her health was much improved; but I suspect the amendment was due, in no small degree, to the good diet and comfortable quarters she enjoyed. In another case (V), in which the use of tonics seemed especially indicated, I have hitherto failed in effecting any improvement. The patient's pulse at his admission was only 64, it was subsequently noticed at 56, with occasionally an interval, almost increased into a pause; it was raised to 64 from 56 by the mere effort of standing erect, and to 80 by walking across the room. The sounds of the heart were dull and feeble, the second differing little in quality from the first; the impulse also was feeble. The large vessels were healthy, and there was no arcus senilis. The effect of tonic treatment was to steady the pulse, but not to relieve the epilepsy.

The difficulty of treating epileptic cases, and especially those which present themselves in a public institution, is much increased by the circumstance that, in a large proportion of instances, the disease has become established before our assistance is requested. What is the nature of that mysterious connection which associates one fit with another, sometimes through an interval of months, or even of years, we are altogether ignorant; but there is too much reason to fear that, when once established, the chance of breaking it is but small; and, small as it is, this chance must rapidly diminish as the connection becomes strengthened by habit. There are some causes of the disease which appear to effect at once a permanent change in the brain, and to render a return of the attacks a matter of certainty. Thus Dr. G. Johnson (Lectures before the College of Physicians—*Medical Times*, 1853) states that an epileptic fit occasioned by fright almost always returns. Of eleven cases of which he had notes, in one only had the fit been single. And whoever has watched the effect produced upon the brain by prolonged anxiety, by cachexia, or by habitual excess in fermented liquors, must have learned how very hard it is to raise that organ above the depraved standard of nutrition, which has become to it almost a second nature.

Transactions of Branches.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

PRESIDENT'S ADDRESS.

By EDWARD MOORE, Esq., J.P., Halesowen.

[*Delivered June 15th*, 1860.]

GENTLEMEN,—I can conceive few prouder positions which a country practitioner can be called upon to fill, than that which by your kindness I now occupy. With considerable diffidence do I undertake the office of President of this important Branch of our great Association, feeling that it is a post which many whom I see around me would have more ably filled. Nor is the difficulty of my position lessened by the fact that I succeed a gentleman so able, scientific, and classical, as he who has so lately vacated the chair. Under these circumstances, I must beg of you to be indulgent to my omissions, and to afford me your aid while I occupy this post, mistrustful as I am of my power to do honour to the appointment.

Following the established practice of Presidents taking this chair, I intend to address to you a few observations on matters connected with our profession; not, indeed, an elaborate treatise on any scientific subject, but rather somewhat desultory remarks on current events relative to the profession generally, the position of our great Association, and the transactions of our own Branch.

When we look back on the history of medicine and surgery, we cannot but congratulate ourselves on the advances which both sciences have made during the last half century, and especially during the last few years. It has been presumptuously affirmed that our profession has not kept pace with the requirements of this rapidly progressing age; and it has been stated that medicine is the same uncertain science that was known to our forefathers. But this I take upon me to deny; and I have only to mention some of the discoveries which have been latterly made, to convince any but the most sceptical of the truth of my assertions. Have the researches of the illustrious, and now mourned, Bright added nothing to our knowledge of kidney-disease? Has the same authority added nothing to our knowledge of the pathology of disease of the pancreas, and to the physiology and right interpretation of the use of that organ? Are the researches of Marshall Hall on the nervous system to be forgotten? and is not the ready method a vast improvement on the old plan of resuscitation? Does not the stethoscope reveal to us, and enable us to combat earlier, and therefore with much more certainty, diseases of the membranes of the heart occurring during the course of rheumatic fever? And has not a better knowledge of disease caused us to avoid the Scylla and Charybdis both of the Hamiltonian and of the Sangradian practice? Again, is not the conservative surgery of the present day a vast improvement over that of bygone years? Now the removal of a limb is the exception and not the rule, and many an extremity, which formerly would have been condemned, is now restored to an useful state; for, with advancing knowledge, a greater confidence in nature's healing powers has taught us to trust her more, and, aided by that wondrous fluid chloroform, we are enabled to use the gouge and cutting pliers, where formerly the knife and saw would have been the *dernier ressort*.

Instances of the kind might be multiplied to a very considerable extent; and, if any still doubt, let them read such works as *Strictures on the Present Practice of Physic*, published in 1778; or *Medicina, or Hints on Diseases that are not Cured*, 1781; or *Medicinæ Vindicator, or Reflections on Bleeding and Purging in the Beginning of Acute Diseases*, 1728. From these it may certainly be inferred, that we are far before our forefathers, both in theory and practice. And with this improvement in the profession at large, have not the members of it individually improved also? Many, indeed, possess an amount of scientific knowledge and acquirements which have never been

exceeded; and all must now have the education of gentlemen. The *Medical Act*, which our former President so justly called our "Magna Charta", will no doubt greatly benefit the profession; and, although there are many points connected with that Act open to improvement, still, for the first time in the history of our profession, the Government of the country has acknowledged our legal existence, and our new Council is part and parcel of the State.

After the many critiques we have all seen on the *Medical Register*, it will be unnecessary for me to add another; but I cannot omit to observe that the suggestion is a very good one, that the Registrar should publish quarterly the names of all those who register in that period, in order to enable the public to know whose names have been added to the list since the annual publication.

The proceedings of the Council of Medical Registration and Education have been watched by all of us with great anxiety. Time, however, will not permit me to review any of their acts; but I cannot refrain from expressing my regret that they have sometimes allowed the "refinements of science" to enter their deliberations, instead of acting with decision, and at once settling all disputed questions. Against the order of the Council respecting the standard of medical education, I would not say one word. I quite agree with them that the preliminary education should be good, and secured on the firm basis of classical and general knowledge, and that every member should enter the profession through the same portal; but I am disposed to hesitate when I look at the scheme for the professional part, which, if much increased either in time or expense, will prevent many practitioners of the present day from educating their sons to succeed them; and, as I believe that source is one of the great founts from which new members are brought into the profession, it strikes me that this subject requires to be treated with great judgment.

I cannot pass without remark the general feeling of dissatisfaction which the conduct of the College of Surgeons, and other examining bodies, has evoked by their admitting to examination and granting diplomas to uneducated men, and to those who have been practising as druggists. I was in hopes that the petitions presented to the Medical Council would have elicited some strong suggestion, at least, for the future management of these examinations; but, from a letter lately published by their President, they do not appear to view these proceedings with any dislike. I scarcely know in what light to look upon that production of Sir B. Brodie; for, if it emanates from that gentleman alone, it will carry no more weight than the high authority of his respected name; if authorised by the Medical Council, it will be a source of deep regret to many members of the profession, who have the love of that profession at heart. I cannot see the analogy which Sir B. Brodie tries to establish (as an excuse for the unjustifiable acts of the College Council) between the state of the profession now and in 1815. No objection has been raised against admitting all licentiates of the Apothecaries' Company to examination: the objection is against those who have received no medical education whatever. I hope I may be pardoned for trespassing upon your time by reading a few extracts from the speech of Lord Granville at the London University on the 9th of May last, which extracts I would humbly recommend to the members both of the Medical Council and of the College of Surgeons to read and practise. He said:—

"They all knew how noble the medical profession was; in hours of peace, how instructing and agreeable the conversation of a medical man was; and, in hours of sorrow, how consoling the conversation of a man of cultivated mind. It was, therefore, of the utmost importance that a medical man should be a person of general education. When he considered what industry, intelligence, perseverance, and logical power were necessary to qualify a man for the profession, he was disposed to place it above that of the law; it was therefore important to observe, that those who intended to devote themselves to the medical profession should have as a groundwork a general education."

I cannot omit to mention the Registration Societies formed in the metropolis, in this town, and in other localities, and which include many of our own associates. No one can have read the journals during the past year, without an impression of the great good which these societies, and particularly the London one, with its indefatigable Secretary, Dr. Ladd, and the one in this town, with the equally indefatigable Mr. Spratly, have brought about. I need only remind you of the notorious Watters gang and their urine-bottles. In favour of them, the fable of the carter and Jupiter occurs to my mind—"God helps those who help themselves"; and, by a vigorous action of these societies, I do not despair of shortly witnessing a great diminution of medical impostors and their filthy advertisements, which, to the discredit of our Government, are allowed to sully the pages of many of the papers we take up.

They manage these things better in France. There the ignorant quack generally suffers for his misdeeds; here, as a rule he escapes, scot-free, because, as one of our judges once observed, "not having received the proper education, he could not be expected to know any better." I am not sanguine enough to anticipate a stop being put to deleterious patent medicines; to the counter-prescribing druggists; or to the practice of uneducated persons; for England is indeed the paradise of quacks. They have abounded at all times, and at all seasons; and whether the humble vendor of the penny box of pills in the Saturday evening market, or the more aristocratic disciple of St. John Long, they will always find credulous and ignorant persons, both amongst the rich and poor, receiving their important and astonishing assertions with implicit belief.

Still, with our new Act, much may be accomplished; and, at all events, we can now stop such individuals from assuming our titles, and when they are stripped of their borrowed plumes half their importance will be gone. It was with regret that I perceived that the Medical Council declined to institute legal proceedings against these offenders; as it appears to me that such resistance would have come with double force from a body holding the recognised position in the State which it now occupies. It is quite within the province of the Council to proceed legally against persons usurping titles; and they might a least have carried the law into effect to this extent.

I now touch upon the most painful part of the subject connected with quackery—

"Iliacos inter muros peccatur, et extra."

We have treachery within and treachery without. Even the legitimate sons of medicine forsake her paths for the more flowery and easier road to competency, called *Homœopathy*. Time will not allow me to give even an infinitesimal contradiction to this absurdity, which (as the *Lancet* observes) scientific medicine condemns as being the mystic jargon and dreamy nonsense of Hahnemannism. I cannot but think that gentlemen practising the system are bound in honour to return their diplomas, which they gained by professing another and totally different belief. Their names should scarcely be placed in the same register with an earnest, hard-working, orthodox practitioner. Mesmerism arose and had its day of popularity; the more dangerous excesses of hydropathy have departed; brandy and salt is heard of no longer; and I have a firm conviction that the star of homœopathy will soon sink below the professional horizon.

I shall now allude to the cases of poisoning which have occurred during the past year, not with a view of commenting upon the difference of opinion which divided the medical world —(for, as Sir William Temple has well observed, "Physicians may undertake that, when divines arrive at certainty in their schemes of divinity; or lawyers in those of law, or politicians in those of civil government; they will do so likewise in the methods and practice of physic")—but for the purpose of drawing attention to the growing feeling in the public mind that coroners should be medical men. I formed this opinion a long time ago, when I held the office of deputy-coroner for the county of Worcester; and I feel satisfied that, the more the subject is ventilated, the greater the wisdom of the metropolitan county ratepayers and those of this borough (Birmingham) will appear in having appointed medical in preference to legal coroners.

The medical service of the Royal Army has latterly been much improved, and to a well qualified young surgeon is not an undesirable position. This improvement has been obtained from the Government chiefly by the increased intelligence and attainments of the profession as a body, backed by the common sense of public opinion. The same warrant has been extended to the Naval medical officers, but is not yet, I believe, acted up to by commodores, captains of ships, and other officials. Let us hope these worthies will be brought to their proper bearings, and either made to obey Acts of Parliament or to resign their commissions. Let us also hope that the grievances under which the Indian medical service labours may be removed by the same warrant being extended in its fullest sense to that service; and let us support the claims of the Naval and Indian officers by our JOURNAL and our Society.

The Poor-law medical service has of late been the subject of much thought. Here there can be no question that there is great room for improvement. Look at the position of many of our poorer brethren, especially in the rural districts—overworked,

badly remunerated, cruelly oppressed by illiterate boards—and we shall soon see that there is something radically wrong in the present administration of the Poor-laws. The remedy is in our own hands; let not degrading and ill paid appointments be accepted, and we shall soon find that an alteration will take place. Here I cannot but pay a well merited compliment to the labours of Mr. Griffin in the cause, although I am not sorry that his late Poor-law Medical Relief Bill was withdrawn, containing, as it appeared to me, some clauses of an objectionable character.

We have, with the aid of the medical press, gained a victory over the Government, and forced them to appoint a Medical Council; we have gained a victory over Assurance societies, and forced them to remunerate us for our services; we have wrung from the military authorities a proper status for our army surgeons; and we must now bring the force of our Association to bear on Poor-law grievances, and endeavour to obtain a more equitable adjustment of the tax on our skill and labours.

In thus reviewing the prospects of the profession, I have omitted to glance at the small rewards the State offers to our eminent men. This state of things cannot last; and the march of improvement must ere long bring to us some of the loaves and fishes at present absorbed by the other professions. Medicine is long-enduring; but now allied to sanitary science and hygiene, it must claim rewards; and the unanimous opinion of the press regarding the propriety of the ceremonial which lately took place on the removal of Hunter's body to its present resting-spot, shows that the current of public opinion is setting in full flow in this direction.

That our great Association has in some measure aided this better appreciation of medicine as a profession cannot be denied; and, as a very old member, I cannot pass over in silence the consistent and long-continued labours of our respected founder, Sir C. Hastings. That gentleman has lately resigned, and again been elected to the Presidential chair of the Council; and I trust the proceedings at that time were as pleasing to him, as I believe they were satisfactory to the whole body of members. One of the original objects of the Association was the promotion of friendly feelings, and the interchange of thoughts amongst the members of the profession; and I trust Sir Charles has lived to see his intentions carried out by the aid of our Journal, and of Branch meetings like the one we form this day. This is not the time or place to enter into a controversy respecting the continuation of our Journal. There is no question but that it is much improved under the present editor. My own feelings are in favour of its being carried on, cost what it may, and of trying to make it one of the best medical periodicals of the day.

If there is any one thing which the Association has effected, calculated to increase its power and influence, it is the establishment of Branches, which do good by reflecting the ideas which animate the most intelligent of our profession. Here we have an inducement for members to meet, both in social converse, at the prandial board, and in scientific assembly. Here the town and the country practitioners have opportunities of meeting, forming friendships, and exchanging the results of that experience, which all more or less possess; and in this attrition of minds the timid are emboldened, the secluded called forth, and the knowledge of one becomes that of the many.

I will not attempt to compare the present condition of our Branch with the past, or to speculate on its future progress; though, in considering it under both of these aspects, we might take up a cheerful tone. A steady increase of members has marked the exertions of our indefatigable Honorary Secretaries, Messrs. Solomon and Pemberton, to whose untiring energy and skill we are indebted for its present prosperity; and who, with the interest of their profession at heart, have carried on the onerous duties of Secretaries. Although we may lament the removal by death of several of our associates, still we may venture to hope that they will not be unrewarded in that future state to which we are all fast approaching.

The spirit of the day is one of progress. Time was when in the metropolis alone could be enjoyed those communions of professional spirits in which all now have an opportunity of joining in their several localities. Time was when all founts of professional knowledge proceeded from the metropolis. But now, when we look around in this great midland capital, we see seminaries of learning which reflect honour on those who reared them; and through our own Journal we have constant opportunities of obtaining knowledge from the writings of many of the respected and scientific brethren of this Branch.

The Honorary Secretaries will no doubt give you, as they always do, a full report of the transactions of the Branch during the last year; but, as I see around me some gentlemen who probably were not present at the reading and discussions of the different papers, I consider it a great privilege to have the opportunity of again directing your attention to a few of the principal and original points then elucidated, and which strike me as important or practical.

On the 20th October, 1859, Mr. Furneaux Jordan, assistant-surgeon to the Queen's Hospital, read a paper upon the Anatomy and Surgery of Talipes Equino-varus, which he considers the commonest and severest form of club-foot. Mr. Jordan considers it extremely advisable to divide the treatment into two stages. In the first, the tibialis posticus, the tibialis anticus, the flexor longus digitorum, and the tendo Achillis may be divided. In the second stage, the tendo Achillis is again divided. In the first stage, no traction is to be made on the tendo Achillis. After the division of any tendon, no apparatus should be applied until the fourth day. He considers that, to remove the deformity successfully, it is necessary to apply extreme pressure for short and carefully watched periods. In bad cases, he always visits his patients two, three, or four times a day for several successive days. He holds it to be most important that surgeons should constantly be prepared to change the apparatus to prevent abrasions or ulcerations; which, if allowed to occur, may much retard the progress of the case.

Dr. B. Fletcher read a scientific and instructive paper upon Anæmia, suggesting that the term "oligæmia" would be more appropriate, as the first name was really restricted to very few cases. He defined anæmia to be a change or alteration in the blood, which took place, not only in its pulmonary, but at each stage of its circulation, and in its structure. This change consisted in the red globules of blood being reduced, diminished in quality, altered in shape and physical properties, and in some instances nearly devoid of colouring matter, at the same time that fibrine was found existing in a greater relative proportion to the salts than in healthy blood. Dr. Fletcher considers that any cause that lessens the quantity of albumen in the blood gives rise to an anæmic state of the system. In that state there exists an increased proportion of fibrine to the other solids of the blood, and he adopts the view of Rokitansky and Zimmermann, that fibrine is an excretive product, the result of the wear and tear of the system. Dr. Fletcher's impression is that, although there is no appreciable organic change, still, from the relative excess of fibrine, we are liable to most important and dangerous results, the effect of the disintegration of that product (fibrine). The treatment should be to secure as early a return of strength as possible, to prevent any mischief setting in during the state of debility.

Mr. Solomon read a paper on Cancer of the Eye and Lids, illustrated by some beautiful stereoscopic pictures. He stated as his opinion that, since the pathology of cancer had been subjected to the test of the microscope, no case had been reported in which a permanent cure had been effected by the surgical removal of the disease. In former times, he had no doubt that the instances of cure of malignant disease of the eyeball and testes were in reality nothing more than strumous disease of these organs. According to the author's experience, the general health of the patient was materially relieved for a time by the excision of the diseased mass. That this change for the better was not due, as has been stated by some able surgeons, to a mental process, was susceptible of proof by the fact that it took place in children of tender years—mere infants. The great rapidity with which a secondary formation will sometimes appear behind the lower eyelid, Mr. Solomon had been able to explain by a dissection, which shewed that the disease sometimes occupies the temporal fossa, and hence expands into the orbital cavity through the temporo-maxillary fossa almost immediately that the globe is removed; indeed the disease would seem in certain cases to be continuous in the direction named. Mr. Solomon, in the course of his paper, adverted to the comparative rarity of black cancer in the practice of the Birmingham Eye Infirmary, and related a case wherein medical treatment had appeared to arrest for a time the process of encephaloma of the globe. The author recommends operative interference only when the health of the patient begins to be made worse by the pain or irritation of the malignant growth.

On the 8th of February, 1860, Dr. James Russell read a very interesting article, entitled Cases of Syphilitic Disease of the Cranium. He noticed that, in the ordinary form, the disease is denoted by pain, generally of a fixed character, in some parts of the cranium, followed after an interval of differing length by paralytic and convulsive affections; the former being frequently accompanied by rigidity of the limbs of one side of the body,

affording an indication that the surface of the brain was the part chiefly affected. The patient often died with epileptic fits. The author noticed three cases, two of which deviated somewhat from the ordinary pattern of syphilitic diseases of the cranium. One of the cases was strictly conformed to the ordinary type, but was remarkable for the length of time during which the symptoms had existed, comprising a period of twenty years, the sufferer being still alive, his mental and bodily powers being much impaired. The other two cases which he detailed presented singularly local paralysis, chiefly of one of the cerebral nerves; of the third pair on one side, in one case; and of the fifth pair (including its three divisions) in the other. Neither of these cases presented the customary pain, nor were they attended by convulsive or epileptic seizures. Dr. Russell suggested the possibility of epilepsy sometimes depending on this disease of the dura mater and brain, when the disease might have approached in an equally insidious manner, the epilepsy remaining unexplained.

On April 19th, 1860, Dr. W. F. Wade, physician to the Queen's Hospital and General Dispensary, and Professor of the Practice of Physic in Queen's College, read a paper on the Pathology of Lead Colic. He expressed his opinion that the pathology of lead colic, as at present taught, was vague and unsatisfactory, since the best authorities are directly opposed to one another as to the condition of the intestines during the existence of the disease, as well as after death. Besides, the views of neither party are consistent with the phenomena of all cases; a new theory is therefore desirable. Giacomini of Padua started the idea that all the symptoms depended upon spasm, not of the intestines, but of the muscles composing the abdominal wall. M. Briquet of La Charité has adopted and enforced this view. Grisolle, Copland, and others, admit the frequency and severity of these spasms, which are certainly adequate to produce the colicky pain and constipation. Lead enfeebles the voluntary muscles; and muscles enfeebled by any cause have been shewn by Dr. Inman of Liverpool to be peculiarly liable to painful spasms. The laborious occupations of painters, glaziers, etc., conduce to render them susceptible of such spasms. By an artificial irritation of the abdominal muscles during the interval between the paroxysms of lead colic, we can excite painful spasms, which the patient cannot distinguish from the natural exacerbations of the disorder. The effect of rest and electricity in easing the disease, leads also to the belief that it is an affection of the external muscles, more especially since we know that lead attacks the voluntary muscles, but not (as far as we are informed) the involuntary ones. The jaundice, vomiting, dyspepsia, and hardened fæces, depend partly upon the careless and intemperate habits of the patients, and partly perhaps upon the influence of the lead upon the viscera.

On April 19th, 1860, Dr. Francis T. Bond, late physician to the Queen's Hospital, read a paper entitled Observations on Virchow's Theory of Inflammation. He considers, and justly so, that when a theory of a phenomenon like the above has been propounded by so eminent a man as Professor Virchow, it is deserving of the attention of the profession. Upon that point there can be no dispute, and the talented paper he read went most fully into the subject. The following points seemed the most important:—1. That an exudation, in the ordinary sense of the term, is neither essential to, nor is it etymologically applicable to, the results of the inflammatory process. 2. That the fibrine of which most exudations consist is developed in the tissues in which it is found, as the result of purely local action; and that it returns from them to the blood. 3. That the stimulus to inflammation is the most important element of the process, and must be sought for in the deranged functions of the part itself. Dr. Bond then endeavoured to point out the one-sidedness of the common view of inflammation, and showed the importance of considering the influence of the blood on one side, and of the tissues on the other, by reasoning from what we know of the process of healthy nutrition, of which inflammation is, he contended, only an exaggeration. He also gave some reasons deduced from the phenomena of rheumatism, and from other sources, for dissenting from Virchow's view as to the origin of fibrine; and concluded by showing the practical importance of the subject, in reference to the nature of the treatment, which must be greatly influenced by which of the two conflicting views we adopt.

In the arduous and absorbing pursuits of medical life, the general practitioner has usually enough to do in meeting the exigencies of the day and hour. On he must fag; the wheel of events will not stand still for his convenience, neither must he lose his time in vain speculations; and he is sometimes apt to forget the changes which are going on around him; but such meetings as these serve to dispel this disposition, and tend to compel the avoidance of the broad path of routine and empirical treatment. Thus, again, the town and country practitioners are brought into contact, and each are familiarised with the different types of disease which the various localities call into operation.

In pursuance of this exchange of intercourse, if time permitted, I should have wished to make some observations on the pathology of diseases prevailing in the districts west and north-west of this town. It would be a pleasing and useful inquiry how far diseases are influenced by the different strata of soils in various localities. In my own practice, lying as it does partly in a mining and partly in an agricultural district, I have frequently noticed vast differences in the symptoms of diseases, even when prevailing epidemically in both districts at the same time; and the published accounts would seem to show that a still more varied type was the characteristic in large and thickly inhabited towns.

It may with truth be said that sanitary science is developing itself to a much greater extent in towns than in country places, yet the pursuits of the agricultural labourer tend to counterbalance the advantages enjoyed by the town mechanic; and it is to be hoped, with this sanitary improvement, a like salutary change has taken place in the opinions and prejudices of the lower classes. One of the great stumbling-blocks which the country practitioner finds in his path consists in the ignorance and superstition of his patients. For instance, in my neighbourhood, the popular opinion of the value of blood-letting in anything resembling a fit is immense; and, should the patient be suffering from syncope, concussion, or even *in articulo mortis*, not to bleed will give you an unenviable notoriety, which even your success in curing the patient will not counterbalance; this happy result, in the minds of these individuals, will scarcely compensate for the omission.

I will not at this time carry these observations to any greater length, and shall confine my remarks on particular diseases to one only, and just briefly state what I have noticed when attending cases of *diphtheria*, which has been much prevalent around us. This disease at first occurred in solitary cases, without any direct evidence of contagion. I consider it a disease *sui generis*, and, in many characteristics, distinct from any of the varieties of angina I have before attended. It appears to affect the cleanly and well fed, equally with the squalid and poorly nourished. It has occurred in the unhealthily placed cottage and in the well built farmhouse. In some cases, the diphtheric deposit has covered the tonsils and anterior parts of the throat; in others, it has descended towards the larynx, and ended in attacks simulating croup. In some cases, the deposit has appeared of an ashy colour; in others, reddish spots have been discovered in considerable numbers; and the last variety I have generally found the most dangerous and least amenable to treatment. To be successful, the treatment should be early and energetic. I have found the use of caustic to the affected part, emollients externally, and the free administration of ammonia and wine, the most effective.

I shall now conclude with observing that public opinion is made up of individual opinion, as an illumination is made up of single lamps. Let us then go on, each in his own sphere, using all our influence to promote the development of science for the public good. Let us remember the words of Lord Lyndhurst, that self-reliance is the best road to distinction in private life; and, by carrying out that principle, let us show the world that, if we cannot command success, we can deserve it.

It now only remains for me to thank you for your kind attention, and to express the hope that every success and prosperity may attend both you and our Association.

SOUTH-MIDLAND BRANCH.

SUPPOSED FRACTURE AT THE BASE OF THE SKULL: SEROUS EXUDATION FROM THE EAR: RECOVERY.

By John Ody, M.B., Market Harborough.

[*Read at Bedford, June 15th*, 1860.]

This case being remarkable only as an example of speedy and complete recovery after the occurrence of symptoms, usually considered indicative of fracture at the base of the skull and of certainly fatal import, the particulars of it are given as concisely as is consistent with a due appreciation of the severity of the injury.

A groom, aged 26, a sober healthy man, was thrown from horseback, and fell upon the right side of his head and right shoulder. He lay senseless and motionless for a few minutes;

then regained partial consciousness, and vomited. He was found to have received a slight bruise on the top of the head, another on the right temple, and a third, also slight, behind the right ear. Blood issued pretty freely from the ear. He continued to exhibit marked symptoms of concussion of the brain for the next twenty-four hours; viz., after being roused, he could reply rationally, and complain of headache, then relapsed into a drowsy condition; he constantly vomited, and was pale and cold. The pulse was 50 in the minute, weak, but regular. The right pupil acted promptly to the stimulus of light; the left much more sluggishly. He was unable to void his urine, which was, therefore, removed by the catheter on that and the following day. By the evening of the second day he had regained consciousness, though he was still sick on attempting to move; he complained of headache and of giddiness on rotating the head, even a little way.

The discharge of blood from the ear had ceased, but was succeeded by a constant flow of a clear colourless fluid, which fell in drops upon the pillow. This continued to flow abundantly for the four next days, then gradually diminished, and finally ceased on the seventh day after the accident; the patient gradually improving in all other respects. The quantity of serous fluid discharged from the ear was estimated at a drachm per hour throughout the first four days of its flow. One other symptom ought to be mentioned. About the time that the serous discharge from the ear finally ceased, he began to complain of aching pain in the loins, so severe as to render any movement of the lower limbs very difficult. Yet there was no paralysis, nor other symptom of spinal affection; his urine was natural, and the surface free from bruises.

The treatment adopted was calculated to prevent effusion of blood on the brain, to promote its reabsorption, if already effused, and to guard against the probable occurrence of inflammation of the membranes of the brain. With these views, eighteen leeches were applied to the head, mostly on the injured side, even before reaction was established; the head was shaved, and kept constantly cold by means of evaporating lotions; and he took, as soon as the sickness subsided, two-grain doses of calomel every two hours, until in about thirty hours it acted on the bowels and produced slight tenderness of the gums. From this time his amendment was rapid and progressive. Except that he is slightly deaf on the injured side, he now, at the expiration of two months, feels perfectly well, and is anxious to resume his employment, which, however, it has not hitherto been considered prudent to permit.

LETTERS AND COMMUNICATIONS.

Letters or communications for the Journal should be addressed to Dr. Wynter, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the Journal, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

British Medical Journal.

SATURDAY, JULY 14th, 1860.

POOR-LAW MEDICAL REFORM.

Since the withdrawal of the Poor-law Medical Relief Bill by Mr. Pigott, our indefatigable associate, Mr. Griffin, has been earnestly engaged in framing the provisions of a new measure, which is, we hear, about to be introduced to the House of Commons forthwith. The opposition given to the Coroners' clause has led to its being expunged in the forthcoming Bill, and that relating to sanitary matters has shared a like fate. Mr. Griffin has found out that he will have quite enough to do to combat the active hostility of Boards of Guardians, and the passive opposition of the Poor-law Board, without raising up fresh enemies in his path from the ranks of the profession. Indeed, Mr. Griffin has wisely attempted to drown all opposition in this quarter as respects payment, by stipulating in the Bill that all present medical officers who desire it may be exempted from coming under its operation. We trust this condition will reassure those gentlemen who feared that their brethren's gain would be their loss. Mr. Griffin has a hard task before him to hit upon a scheme of payment which shall work fairly for all parties; but, after various calculations, he now proposes as the most equitable arrangement—

"Five shillings per case up to the first three hundred in number, above which two shillings per case only should be paid. In addition to this, a further sum, to be called mileage, is to be paid for all patients requiring to be visited at their own homes; and in order to ensure an uniform rate of payment for all patients in each district, the same mileage shall be paid for each, whether the patient lives next door to the medical officer or at the farthest extremity of a district. Thus, if the farthest inhabited house in a district be four miles from the residence of a medical man, then two shillings per case for mileage shall be paid on all those requiring to be visited at their own homes. The medical officer of a workhouse will be paid for his patients on the same plan; but, instead of mileage for each case in the workhouse, he will have one shilling per mile for each visit to the workhouse. All visits under one mile to be reckoned as one mile."

This appears to us to be a very fair arrangement, and we trust it will carry with it the support of the whole body of Poor-law medical officers. We perceive that the question of Poor-law Medical Reform is made a very prominent topic at all the Branch Meetings this year; but it would be advisable if more active support could be given to the promotion of the Bill than a sentence expressive of sympathy in the President's address. Mr. Griffin is in want of funds even to pay his stationer's and printer's bill. This should not be. He has worked so indefatigably—and all the time up hill—that he deserves something more than the "platonic love" of the profession: we hope that some more substantial support will be afforded to him at the General Meeting. Meanwhile, in order to show Poor-law medical officers that the tender mercies of Boards of Guardians have not relaxed towards them, we append the following advertisement, which may be considered the very model of the skin-flint class, and was without doubt drawn up by some guardian who keeps a Dotheboys Hall establishment.

"Wortley Union: Appointment of Medical Officers and Public Vaccinators. Notice is hereby given, that the Guardians of the Poor of the Wortley Union will, at their meeting, to be held at the Boardroom at the Workhouse, Grenoside, near Sheffield, on Friday, the 27th instant, proceed to the appointment of a Medical Officer and Public Vaccinator for the Ecclesfield Medical District of the said Union, and also of a Medical Officer and Public Vaccinator for the Wortley Medical District of the said Union.

"The district of Ecclesfield comprises the township of Ecclesfield (exclusive of the hamlet of Wadsley, in the said township), and contains an area of 8,764 acres, and a population, according to the last census, of 8,209. The district of Wortley comprises the townships of Tankersley and Wortley, and the hamlets of Midhope and Bolsterstone in the township of Bradfield, the whole district containing an area of 17,946 acres, and a population, according to the last census, of 8,235.

"The gentlemen appointed will each receive a salary of £30 per annum for the performance of their duties as medical officers of the said districts respectively; and the person appointed medical officer for the Ecclesfield Medical District will, at the said meeting, also be appointed medical officer of the workhouse of the said Union (situate in the said township of Ecclesfield), at a salary of £20 per annum. They will also be entitled to receive the extra medical and other fees allowed by the orders of the Poor-law Board, and a fixed sum for every case of vaccination successfully performed by them respectively. They will be expected to reside within their respective dis-

tricts, to furnish all medicines required by the paupers free of charge, and to vaccinate all children resident in their respective districts who may be brought to them at their respective residences, or at any of the stations in their respective districts to be appointed by the Guardians for that purpose; generally to perform the duties of a medical officer, as prescribed by the orders of the Poor-law Board; and to obey the directions of the Poor-law Board and Guardians respectively concerning their said offices. Each of them will also be required to enter into a contract for the due performance of his duties as medical officer, and a separate contract relating to his duties as public vaccinator.

"No person will be eligible for appointment unless he possesses some qualification or qualifications as set forth in the General Order issued by the Poor-law Board, and dated the 10th December, 1859.

"Any further information may be obtained on application at my office, in Penistone.

"Candidates are requested to forward their applications, accompanied by a diploma, certificate, or other document, in proof of their respective qualifications, to me, at my office, in Penistone, on or before Tuesday, the 26th instant.

"The persons appointed will be required to enter upon their respective duties immediately after the election.

"By Order, "JOHN DRANSFIELD,
"*Clerk to the Guardians.*

"Penistone, near Sheffield, 2nd July, 1860."

This precious document illustrates in the most forcible manner the two crying evils of the present system of payment: firstly, its utter inadequacy, as compared with the work done; and secondly, its gross inequality. Here are two districts of about equal population, but the one containing double the acreage of the other; and yet the salary of each is the same—the splendid sum of £30 per annum, *medicines included*. The medical officer that is to be for the Ecclesfield district will have to trudge over (for he cannot afford to keep a horse) thirteen square miles and three-quarters in his daily work; whilst his unhappy professional brother of Wortley will have to accomplish twenty-eight square miles of medical visiting. We are often tempted to ask if boots and shoes are as expensive in the country as in London: if so, how, in the name of all that is wonderful, will the gentlemen about to compete for these two appointments (for there will be active competition, without doubt) expect to make the thing pay? If the working poor of these two parishes are paid by their Guardians, the surrounding farmers, after the same ratio as the parish-doctors, there must be a pretty active demand for cod-liver oil when any of them are ill; but it will be perceived that "the medical officers are expected to furnish *all medicines required by the paupers* free of charge". What a bitter mockery this provision must be. Either it is a sham, and is known to be a sham by the Guardians, in order to fudge off the poor with a semblance of care for them, or it is a deliberate attack upon the purse of the Poor-law officer; for De Jongh will not for thrice thirty pounds a year supply him with the cod-liver oil alone required for such a necessarily physically degenerate set of pauper poor as those of the Wortley Union must be.

We must endeavour to shame the Guardians out of their oppression of the Poor-law medical officers; and if every advertisement of the character we have quoted were exposed before the public gaze—nailed by the editor's pen to his paper, as a stoat or other obscene thing is nailed to the barn-door by the gamekeeper—we should possibly succeed. For our parts, we will only too willingly undertake the nailing process, if our associates provide us with the vermin.

THE WEEK.

ON Thursday week, a statement of much interest in its bearing on the reputation of our hospitals, and on the study of pathological science, was made before the magistrate at the Lambeth Police Court. It was alleged that a young man, aged 21, had become an in-patient of St. Thomas's Hospital, on account of some internal disease; that, on the previous day, his friends had been informed of his death; that, on applying for the privilege of seeing his remains, they were refused, and were told that the body would be sent or might be taken out in the course of the evening. On the coffin being opened by the relatives and friends of the deceased, the body, it was said, was perfectly naked, and placed sideways, with one of the arms, which had been amputated, alongside it, the mouth and eyes open, and altogether presenting a most distressing spectacle. The witness, Mr. King, a builder in Newington, a friend of the deceased, admitted, in reply to the magistrate that it was the custom to open bodies in hospitals; but he added that, in the instance of a friend of his who had died at a public hospital, the medical officers of the institution applied to the widow for her permission to examine the body, the required sanction was given, and a *post mortem* examination took place; but the body was sent home in such a state that the traces of dissection were scarcely perceptible. The magistrate (Mr. Elliott) promised to look over the law on the subject, and communicate with the authorities of St Thomas's Hospital. We hope that, for the credit of this institution, there may have been some exaggeration in the disparaging statement made through the medium of a public court and the public press. If the fact be otherwise—if the assertions of Mr. King be true—the case is altogether an exceptional one. It were greatly to be regretted that any idea should be promulgated regarding the treatment of the dead in hospitals which would not only be contrary to truth, but have the effect of rendering the public unwilling to afford those facilities for the study of pathology which, on the faith of ordinary decency being observed, they are generally so ready to grant in this metropolis.

The Thirteenth Annual Meeting of the American Medical Association was held at New Haven, United States, on the 5th, 6th, and 7th of June. The subject of medical education occupied a considerable share of the time of the meeting. Among the resolutions passed, were two in favour of a three years' course of study for the degree of Doctor of Medicine, comprising attendance on two full courses of lectures; and the inspection of medical examinations for degrees by delegates from the State medical societies. This latter resolution was supported by Drs. Timothy Childs and Worthington Hooker; the latter of whom stated that Yale College (in the chapel of which the Association was holding its meeting) had more than forty years ago adopted the plan contained in the resolution; and that the State Medical Society and the institution had always worked harmoniously together. In accordance with a resolution passed at the commencement of the meeting, th discussion of general matter was limited to the morning sittings, while the afternoon sessions were devoted to the reading of papers in the various scientific sections into which the Association was divided.

Association Intelligence.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING.

THE Twenty-Eighth Annual Meeting of the British Medical Association will be holden in Torquay, on Wednesday, Thursday, and Friday, the 1st, 2nd, and 3rd days of August.

President—JAMES R. W. VOSE, M.D., F.R.C.P., Liverpool.

President-elect—C. RADCLYFFE HALL, M.D., F.R.C.P.L. and E., Torquay.

The Meetings of the Association will take place in the Bath Saloon.

WEDNESDAY, *August 1st.*

1 P.M. Meeting of Committee of Council at the Torquay Club.

2.30 P.M. Meeting of General Council of the Association at the Torquay Club.

7 P.M. First General Meeting of the Association in the Bath Saloon. The retiring President will make a few remarks. The new President will deliver an Address. The Report of Council will be presented, and other business transacted.

THURSDAY, *August 2nd.*

8.30 A.M. Public Breakfast at the Royal Hotel.

10 A.M. Meeting of the Members of the new Council.

11 A.M. Second General Meeting of Members. The Address in Medicine will be delivered by C. BARHAM, M.D., of Truro. Papers and Cases will be read. The Meeting will adjourn at One, and reassemble at Two.

2 P.M. The Report of the Benevolent Fund will be received, and Papers and Cases will be read. An Address in Ophthalmic Surgery will be delivered by W. J. SQUARE, Esq., of Plymouth. The meeting will adjourn at Five.

8.30 P.M. *Soirée* at the Bath Saloon.

FRIDAY, *August 3rd.*

11 A.M. Third General Meeting of Members. The Address in Surgery will be delivered by P. C. DE LA GARDE, Esq., of Exeter. Papers and Cases will be read.

6 P.M. Dinner at the Victoria Rooms. Tickets One Guinea each.

Gentlemen intending to be present at the Dinner, are requested to send notice, as early as possible, to WILLIAM POLLARD, Jun., Esq., Park Crescent, Torquay.

Members are requested to enter, on arrival, their names and addresses in the Reception Room at the Torquay Club; where cards will be supplied which will secure admission to all the Proceedings, and contain such information as may be useful to those who are strangers to the town.

Members who wish for previous information may communicate with W. POLLARD, Jun., Esq., Torquay.

It is particularly requested that all members who propose to read papers, will communicate with the General Secretary without delay. Papers are promised by Dr. Brown-Séquard; Dr. Woollaston; Dr. W. Budd; Dr. B. W. Richardson; Dr. W. O. Markham; and Dr. J. C. Bucknill.

Among the principal Hotels, are—the Royal; the Queen's; the Commercial; the Union; the London Inn.

PHILIP H. WILLIAMS, M.D., *General Secretary.*

Worcester, July 3rd, 1860.

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
METROP. COUNTIES. [Annual Meeting.]	Crystal Palace, Sydenham.	Tues., July 17, 3 P.M.
READING. [Annual Meeting.]	Council Chamber, Reading.	Wed., July 18, 4 P.M.

[To prevent delay, Reports of Branch Meetings should be sent direct to the office, 37, Great Queen Street.]

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

THE Committee will meet at the Queen's Hotel, Birmingham, at one o'clock, on Thursday, the 19th inst.

Business:—Report of Council; Arrangements for Annual Meeting; the JOURNAL.

PHILIP H. WILLIAMS, M.D., *General Secretary.*

Worcester, July 3rd, 1860.

NORTH WALES BRANCH: ANNUAL MEETING.

THE eleventh annual meeting of this Branch was held at the Royal Hotel, Rhyl, on Tuesday, the 3rd of July, at one o'clock P.M.; A. E. TURNOUR, M.D., president, in the chair. There were also present:—J. C. Davies, M.D. (Holywell); R. Davies, Esq. (Llanfairtalhairn); T. T. Griffith, Esq. (Wrexham); E. T. Hughes, M.D. (Mold); J. R. Hughes, M.D. (Denbigh); D. Kent Jones, Esq. (Beaumaris); Edwin Jones, M.D. (Rhyl); G. T. Jones, L.R.C.P.Ed. (Denbigh); Price Jones, L.R.C.P.Ed. (Rhyl); Ll. Lodge, L.R.C.P.Ed. (St. Asaph); T. Morris, Esq. (Marford); O. Roberts, M.D. (St. Asaph); F. Theed, M.D. (Rhyl); E. P. Williams, M.D. (Denbigh); and J. Williams, Esq. (Holywell).

About an hour before the general meeting commenced, the retiring president (Dr. Theed) invited the members of the Council and others to assemble at his house, to arrange the preliminaries of the meeting, and to partake of his hospitality. Having a few days before met with an accident, he was unable to attend the annual meeting.

At one o'clock, the President-elect, Dr. Turnour of Denbigh, took the chair, when letters were read from Dr. Williams of Wrexham, Mr. R. Jones of Carnarvon, Mr. Eyton Jones of Wrexham, and others, stating their inability to attend, and heartily wishing the meeting every success.

Report of Council. The following report was read by the Secretary:—

"The Council of this Branch, while they do not desire to occupy much of your time with a lengthened report, are anxious to direct the attention of the members to some of the more important questions connected with the well-being of the profession.

"Your Council have noticed a discussion in the JOURNAL, originated by Mr. Dix of Hull, suggesting an alteration in the publication of that paper, as to whether it should continue in its present weekly issue, or appear fortnightly, or even monthly. Your Council wish to remit this subject for your consideration.

"Another matter for the expression of your opinion consists in the question as to whether an amendment is necessary in the Medical Act of 1858. Your Council will take this opportunity of saying, and they feel persuaded that their views will be fortified by all who have the interest and dignity of the profession at heart, that the Act is capable of considerable improvement. Perhaps the adoption of the propositions of the Northamptonshire Medical Registration and other kindred associations may tend to remove the evil complained of, and afford protection to qualified members. Some decisive step is assuredly called for, as, from the recent judgment of the Court of Queen's Bench, the quacks and various impostors have received great encouragement to continue in their nefarious practices, and will now more than ever feed upon the credulity of the public. It is to be hoped that the Medical Council will lose no time in arriving at a just appreciation of the magnitude of the present question, and agree to press upon Government the necessity of immediate legislation towards effecting the desired amendments in the Act.

"Your Council regret that the Poor-Law union surgeons have not yet obtained a redress of the grievances with which they have been so long oppressed, and would express the hope that a well-digested measure of reform may be brought forward in Parliament by Mr. Pigott, freed from the objections which were raised against the late Bill by the Poor-Law Board and boards of guardians.

"Your Council desire to bring prominently before the meeting the claim of the Medical Benevolent Fund of the Association for sympathy and support. The amount of good which this excellent charity dispenses amongst our unfortunate and distressed brethren, by the noiseless and delicate manner with which it grants its benefits, is incalculable; and as soon as the state of the funds of this Branch will permit, it would, in the opinion of your Council, be a kind and good course to present a donation to that institution.

"In conclusion, your Council are glad that they can report favourably upon the prospects and success of the North Wales Branch. They have no doubt that, as time rolls on, and its professional and social advantages are better understood, it will gather increased strength from the intelligent and respectable portion of the profession in the northern counties of the principality.

"The finances of the Branch exhibit a gradual increase, there being a balance of £6: 10: 6 to meet the current expenses of the year."

Dr. HUGHES (Mold) moved—

"That the report of Council be received and adopted."

Dr. ROBERTS (St. Asaph) having seconded the motion, it was unanimously agreed to.

Vote of Thanks to the late President and Council. Mr. GRIFFITH (Wrexham) moved, and it was unanimously accorded—

"That the best thanks of this meeting are due, and are hereby tendered, to Dr. Theed of Rhyl, the late president, and to the other members of the Council of this Branch, for their valuable services during the past year."

President-elect, and Place of Meeting, for 1861. It was moved by Dr. HUGHES of Mold, seconded by Dr. ROBERTS of St. Asaph, and was unanimously responded to by the meeting—

"That Thos. T. Griffith, Esq., of Wrexham, be the president-elect for 1861, and that Wrexham be the place of annual meeting for that year."

Members of the Branch Council. Upon the proposition of Dr. G. T. JONES of Denbigh, and seconded by Dr. LODGE of St. Asaph, it was agreed that the following members constitute the Council of the Branch for the current year, in addition to the officers mentioned in Bye-law 7, namely:—E. Williams, M.D. (Wrexham); O. Roberts, M.D. (St. Asaph); R. Jones, Esq. (Carnarvon); H. A. Roberts, Esq. (Brynmeurig); T. Morris, Esq. (Marford); J. Williams, Esq. (Holywell); and J. R. Jenkins, M.D. (Ruthin).

Secretary and Treasurer. It was moved by Dr. ROBERTS of St. Asaph, and seconded by Dr. EDWIN JONES of Rhyl, and carried—

"That Mr. Kent Jones be re-elected secretary and treasurer."

Place of Meeting of next Branch Council. Mr. DAVIES of Llanfair moved, and it was seconded by Mr. J. WILLIAMS of Holywell, and carried—

"That Rhyl be the place for the meeting of the next Branch Council, and that all members of the Branch be free to attend the same."

The JOURNAL. Dr. ROBERTS of St. Asaph moved, and it was seconded by Dr. HUGHES of Mold, and carried unanimously—

"That this meeting cannot coincide with the views and opinion of Mr. Dix of Hull respecting the alteration which he proposes in the publication and issue of the BRITISH MEDICAL JOURNAL, which, as being the organ and the medium of communication between the members of the British Medical Association, is ably conducted by its talented editor, Dr. Wynter, and only requires more efficient support from ourselves and brother associates, with good and practical papers or contributions of high merit, to ensure for it that position in weekly medical literature to which it is properly entitled."

The President's Address. The President delivered his address, which was warmly applauded, and elicited, on the motion of Mr. Griffith, an unanimous vote of thanks, with a request that he be pleased to allow it to be published in the BRITISH MEDICAL JOURNAL.

Papers and Communications. The following papers were read:—

1. On Delirium Tremens. By T. T. Griffith, Esq.
2. On Vaccination, and the possibility of rendering it more efficient than it appears to be at present. By E. T. Hughes, M.D., Mold.
3. A Calculus, of large size, from a boy of eighteen years, was exhibited; with Notes of the Case. By J. R. Hughes, M.D., Denbigh.
4. Preparation of Hernial Sac; and another Preparation of Gall-Bladder completely filled with Stones; with Remarks upon the two Cases. By O. Roberts, M.D., St. Asaph.
5. On the Surgical Treatment of Carbuncle. By. F. Theed, M.D., Rhyl.

Dinner. The dinner took place at four o'clock at the Royal Hotel. The usual loyal, professional, and social toasts were proposed and responded to, and brought to conclusion another pleasant and interesting annual meeting.

Reports of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 26TH, 1860.

F. C. SKEY, Esq., F.R.S., President, in the Chair.

ON CONGESTION OF THE HEART AND ITS LOCAL CONSEQUENCES.

BY WILLIAM JENNER, M.D.

THE author stated that the objects of this paper were to call attention to the occurrence of congestion of the muscular tissue of the heart, to the most common and direct consequences of that congestion—viz., induration and toughening of the walls of the heart—and to the influence which those changes of texture exercise on the development of dilatation of that organ, by rendering permanent every increase in capacity from over-distension, which would be temporary in a heart whose walls were normal. Impediment to the passage of the blood, Dr. JENNER said, through the right side of the heart, whatever its cause, must be attended by over-distension of the veins of the heart; and as very gradually developed, long continued, intermitting congestion of any organ, the functions of which are over actively performed, notwithstanding its congestion, is followed by induration, toughening, and hypertrophy, so the walls of the heart will, under the conditions specified, become harder, tougher, and thicker, than natural; and as these changes in the texture of the walls of any hollow viscus are the conditions which determine the occurrence of *permanent* dilatation of that viscus, when pressure on the inner surface of its walls is sufficient to over-distend them, so when these changes affect the walls of the heart, and there is great impediment to the escape of blood from its cavities, they lead to its permanent dilatation. After describing the general and microscopical characters of hearts, the walls of which are indurated, toughened, and thickened, from long continued congestion, the author detailed several cases, for the purpose of illustrating the general positions maintained in the paper.

ACUTE CARIES OF THE WALLS OF THE TYMPANIC CAVITY, PRODUCING ULCERATION OF THE INTERNAL CAROTID ARTERY.

BY JOSEPH TOYNBEE, F.R.S., F.R.C.S.ENG.

Cases of ulceration of the internal carotid artery, arising from caries of the walls of the tympanum, being so extremely rare that the author had found but one on record, he had been induced to lay the following case before the Society. W. C., aged 46, a jobbing builder, was admitted, under Mr. TOYNBEE'S care, at St. Mary's Hospital, as an out-patient, on August 18th, 1859. He was sallow and thin, and evidently out of health. Two years previously he had received a violent blow on the head above the left ear. Three months before his admission at the hospital, during a violent fit of coughing, he was seized with intense pain in the left ear, which became constant; this pain was followed by discharge, which was also constant. In spite of all treatment, the pain and discharge continued; and on January 16th, blood of a bright red colour came from the ear, and continued to do so at intervals until January 27th, when the patient died.

Upon a *post mortem* inspection, the upper and anterior osseous walls of the tympanum were found to be carious, and there was a large aperture communicating with the cavity of the canalis caroticus. A small ulcerated opening was found in the internal carotid artery, through which the hæmorrhage had taken place.

ON BRIGHT'S DISEASE, CONSIDERED IN RELATION TO ITS ORIGIN IN THE TUBES THEMSELVES, OR IN THE INTERTUBULAR STRUCTURES. BY W. H. DICKINSON, M.B.CANTAB.

The object of this paper was to show that all the forms of diseased kidney, large and small, rough and smooth, were capable of arrangement into two great classes; that in one there was disease proper to the secreting surface of the tubes, while in the other there was disease essentially of the structures between them; and that the great characteristic difference between these two conditions was the presence or absence of superficial granulation.

[As Dr. DICKINSON'S views on this interesting subject have already been laid before our readers, in an abstract of his graduation thesis, published at p. 603 of the BRITISH MEDICAL JOURNAL for July 30th, 1859, we may be excused, considering the demands on our space, from reproducing them here. EDITOR.]

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Physiological Subsection.

The following are abstracts of some of the papers read at the recent meeting in Oxford of the British Association.

THE ACTION OF TEA AND ALCOHOLS CONTRASTED.

BY EDWARD SMITH, M.D., F.R.S.

The object which the author had in view was to express in a decided manner the action of these two great classes of substances, in order that their suitability in health and disease might be explained, and data given upon which those may argue who advocate a course opposed to the temperance movement. His observations were based upon his own experiments, which have already appeared in the *Philosophical Transactions* for 1859.

He shewed, in reference to tea, that it excites all vital transformations; and whilst it increases the frequency, depth, and chemical changes of respiration, it at the same time increases the action of the skin, as shown by the increase of perspiration. Hence it promotes the transformation of food and tissue, and at the same time cools the body. Fat and acids lessen or prevent this action on the skin, whilst alkalies increase it. From such facts he deduced the conditions of system, season, and climate to which tea is applicable, and showed how far such deductions from science correspond with the actual instructive practice of mankind. He showed that it was not applicable in the absence of food, but only when the system was replete with food. It was not fitted for breakfast, nor for those of spare and active habits, nor to certain exertion, nor for those who perspire too freely, nor for prisoners, nor for the ill-fed and the destitute, nor for the young. It was the most fitted for the old, the corpulent, the sedentary, for some forms of deficient accumulation, for soldiers, for hot climates and seasons, unless at the period when, even in these conditions, the skin is too active, and for all conditions in which there is excess of food in relation either to the necessity for it, or to the power to transform it. It is especially fitted to aid in the transformation of starch and fat foods.

He then showed in what respect the action of coffee differs from that of tea, viz., in lessening the action of the skin, and thereby preventing the waste of heat; lessening the necessity for the transformation of food, by acting upon the kidneys, and sometimes upon the bowels. The conditions under which coffee should be taken are therefore very different from those in which tea is applicable, and in practice we do recognise this difference. Coffee lessens the consumption of food, whilst tea increases it; because the former conserves the heat of the body, and the latter disperses it.

The subject of alcohols was fully discussed, and it was shown that the class ought to be broken up, since the members of it contain very different amounts of alcohol; and beers, if not wines, exert their principal action by the elements apart from the alcohol. The author showed that rum acts differently from brandy and gin, and is a true restorative. He stated that there are no points of similarity between the actions of tea and spirits, and that the latter were useful in conditions quite opposed to those in which tea is required, viz., where it is desired to lessen the action of the skin, and at the same time to sustain the action of the heart. In these respects, spirits exert a powerful influence; but in a normal condition, in health, all the evidences of their action show that they are poisons and not foods.

Beers he thought to be valuable according to the amount of gluten, sugar, acids and salts, which they contain, and hence that the good old-fashioned English ales, made of malt and hops, are of infinitely greater value than the thin bitter trash which has become so fashionable under the name of pale or bitter beer. The action which is of real value is the power which genuine ale has, by its gluten and sugar, to promote the transformation of food, as shown by the author's experiments; and thereby the interesting fact was made out, that in this important respect tea and good beer have an analogous action, and hence that there is truth on both sides of the temperance question. Ales, however, have a greater affinity to coffee than to tea, since they lessen the action of the skin, and at the same time they increase the action of the heart. They are also fitted to certain exertions in a far higher degree than tea, and indeed in many respects they are suited to different conditions. The author reprobated the introduction of ales into India, believing that, from their power to lessen the action of the skin, the conditions under which they would be useful are very exceptional. If, however, they withdrew the soldier from the temptations of the raw spirit named arrack, they would be of some service.

ON SACCHARINE FERMENTATION WITHIN THE FEMALE BREAST.

BY GEORGE D. GIBB, M.D., M.A., F.G.S.

In 1853, Vogel announced the discovery of vibriones in human milk, which he believed to be the result of fermentation of the milk itself. This view was combated by other observers, who denied its correctness because the fluid was never found to be acid in its reaction. In the latter part of 1854, Dr. Gibb made some researches into this question. An infant, seven weeks old, was brought to him in the most extreme state of emaciation, but whose mother had the appearance of the most perfect health. The child, although skin and bone, was plump at birth, and no disease could be detected to account for its condition. It was ravenous, never satisfied, and had profuse diaphoresis and diuresis, but no diarrhœa. Various examinations of the milk, as drawn direct from the nipple, showed it to be rich in its constituents, especially the sugar, of specific gravity 1032 to 1035, and always neutral or alkaline. The microscope revealed numbers of living animalcules, those known as the *vibrio baculus*, but which he proposed to call the *vibrio lactis* as more appropriate. There was an absence of mammary congestion and heat, but much sexual excitement, which it became necessary to control by proper treatment. The child was gradually weaned, and ordered a diet with plenty of good cow's milk: it ultimately recovered. The mother's milk retained the vibriones for some time, and was always rich in sugar, but on withdrawal it turned sour much sooner than cow's or healthy human milk. The author considered that fermentation of the saccharine element was the cause which gave rise to the generation of these animalcules.

From 1854 to the present time, he had examined many hundred specimens of human milk, chemically and microscopically, and had occasionally found two genera of animalcules to be present in that secreted in the glands of those whose general health was disordered from various causes during lactation, or where the process of lactation itself was prolonged, or where the quantity secreted was small, and wholly insufficient to satisfy the wants of the infant. The two varieties of animalcules were found at various periods of lactation, but not in the same person. They consisted of the *vibrio lactis*, as he called it, resembling little rods or minute hair-shaped bodies, similar to those found in active fluids of the body; and of monads, which were more common, of varying diameter, and which he called *monas lactis*. The milk varied in its character, but was always neutral or alkaline, and never acid, and was well supplied with sugar. The children, as a rule, were badly nourished, often greatly emaciated, and died of inanition, unless their food were changed. The affected milk did not undergo its natural changes in the child's stomach, so necessary towards healthy assimilation.

The act of fermentation the author considered as due solely to the sugar, and the formation of lactic acid was by no means to be looked for as a proof of it. He inferred that there was either none at all of this acid, or that it was formed in too small a quantity to influence the milk: its presence would destroy the animalcules. The rapidity with which the milk became sour, out of the body, was an argument in favour of intramammary fermentation. Through reflex nervous agency from the uterine organs, the milk receives as it were a galvanic shock at the moment of its secretion, which causes partial fermentation, generating these minute little bodies from the surface of the mucous membrane of the lactiferous tubes, which in many cases accounts for the immense number present. In the majority of cases there is heat and congestion of the breasts, and very slight fever; and it is of great importance to examine the milk, for the sake of the child.

THE PHYSIOLOGY OF SLEEP. BY ARTHUR E. DURHAM, ESQ.

Mr. Durham defined sleep to be that state of cerebral repose which is essential to the nutritive repair of the brain-substance—a state, therefore, in which consciousness, sensation, and volition (the great manifestations of the brain's activity), are temporarily suspended; but so suspended as to be easily restored by the action of stimuli, external or internal. By experiments upon animals, and ocular examination of the appearances of their brains under different degrees of excitement and during sleep, Mr. Durham had obtained sufficient evidence that every variation in functional activity and repose was characterised by a change in the condition of the cerebral circulation. The removal of portions of bone by means of the trephine,

and the substitution of watch-glasses, rendered the surface of the brain easy of observation. It appeared from investigations thus conducted, that during sleep the brain is comparatively bloodless; the veins are *not* distended, and the capillaries contain comparatively little corpusculated blood. During waking, and still more under considerable excitement, the circulation is much more active. Arteries, capillaries, and veins, are all highly injected with rapidly moving blood. The hypothesis, that venous pressure is the cause of sleep, was thus shown to be untenable. The author's own hypothesis, and his explanation why the different states of the circulation necessarily corresponded to the different degrees of functional activity, were stated, logically defended, and supported by experimental evidence. The correlation of the intracranial circulation with that in other parts and organs was fully dwelt upon; and an explanation of many of the phenomena of sleep and sleeplessness was deduced. The various kinds of coma and lethargy were proved to be distinguishable from healthy sleep, not only by their results, but also by the appearances of the brain during their continuance. The nature of dreams, in reference to states of the cerebral circulation, was touched upon; and many practical suggestions were made as to the best methods for inducing sleep under various different conditions of wakefulness.

THE ARTIFICIAL PRODUCTION OF BONE, AND OSSEOUS GRAFTS.

BY M. OLLIER.

M. OLLIER exhibited some specimens illustrative of the results of his experiments on the production of bone, and summed up in the following propositions:—

1. When the periosteum is detached from the bone, one end being left attached, bone is formed in the direction of the periosteum, determined by the size and position of the portion of membrane.

2. After union has commenced to take place between the periosteum and the soft parts, the pedicle may be divided, but bone will still continue to form.

3. If the periosteum be removed altogether and inserted among the soft parts, it will make an attachment, and bone will be developed.

4. If the inner surface of the periosteum be scraped off in part, no bone will form on the portion that has undergone this process.

4. If the matter scraped from the inner surface of the periosteum be brought into contact with soft parts, bone will be developed from the periosteal cells.

5. If a bone be taken out of its periosteal sheath, new bone will be produced; but if a segment of such sheath be removed, no bone forms in that space.

6. If a bone be removed entire with its periosteum, and inserted in soft parts, adhesion will take place, and new bone will be deposited from the periosteum on the old bone.

7. If, in a piece of inserted bone, a part be deprived of periosteum, that part dies or is absorbed. This latter process may take place by the denuded portion becoming either encysted or subjected to suppuration. As a general rule, in animals that are healthy, and live in the country, the process of encysting is presented; while in feeble animals, and those living in towns, suppuration is the ordinary result.

ON MUSCULAR ACTION FROM AN ELECTRICAL POINT OF VIEW; WITH EXPERIMENTS. BY C. B. RADCLIFFE, M.D.

The chief object of this paper was to show that the action of electricity upon muscle is the very reverse of what it is ordinarily supposed to be—an active antagonistic contraction, and not an action stimulating this condition. Acted upon by electricity, that is to say, the natural physical attraction of the muscular molecules is overcome, and the state of relaxation is produced; not acted upon by electricity, the muscle contracts—contracts because the action is at an end which counteracted the natural physical attraction of the muscular molecules. At the close of the paper, Dr. RADCLIFFE exhibited, by means of a very delicate galvanometer and other appropriate apparatus, several of the more fundamental experiments upon which his view was based.

ON THE TERMINATION OF NERVES IN STRIPED MUSCLE.

BY L. BEALE, M.B., F.R.S.

Dr. BEALE offered some remarks on the termination of nerves in striped muscle, with reference to some preparations to which he wished to draw attention. He showed that every elementary fibre of striped muscle was abundantly supplied with nerve-fibres. In this and many other tissues, the nerves commenced or terminated in a network. In the alternate ramifications of all nerves in animals and in man were numerous little oval bodies (nuclei) by which the fibres were brought into relation with other tissues. By the division of these, new fibres were formed. They were present on all nerves,—motor, sensitive, vascular,—and a great number was associated with perfection of nervous action, and *vice versâ*. Dr. Beale's preparations demonstrated that the surface of some elementary fibres of striped muscles was nearly covered with nerves and capillary vessels. The elementary fibres of the tongue and diaphragm receives a greater number of nerves than most other muscles. The manner in which the preparations yielding these important results were made, was briefly alluded to.

ON THE PROCESS OF OXYGENATION IN ANIMAL BODIES.

BY B. W. RICHARDSON, M.A., M.D.

So soon as the discovery of oxygen by Priestley became an established fact in the world of science, inquiries were set on foot as to the influence of this substance on animal bodies. The term by which it was long known, "vital air", indicates sufficiently the interest that was attached to it in a physiological point of view. Priestley himself made various physiological experiments with oxygen, in which line of research he was followed by Lavoisier, Beddoes, Sir Humphry Davy, Hill, and several other celebrities of the declining eighteenth, and rising nineteenth century. From the researches of various experimentalists, it had been concluded that the inhalation of oxygen in the pure state, by giving rise to a greater absorption of the gas, sets up an increased oxygenation in the body—hypercausis, and inflammatory conditions, general and local. This view, first promulgated by Dr. Beddoes, and followed up by many cotemporary writers, was probably the basis of the chemical nomenclature of disease invented by Baumé, in which disorders were divided into those of oxygenation, of calorification, hydrogenisation, azotifaction, and phosporisation, with remedies of the same names for their treatment.

A second conclusion as to the influence of oxygen on animals, intimated (also from experiment) that oxygen, when inhaled in the pure form, is even less active than as it exists diluted in common air; that, instead of increasing the combustion of the body and its activity, it lessens these; and that animals exposed to it too long die from coma attended with a steady and undiminishing exhaustion. The idea that oxygen is absorbed when the gas is breathed in the undiluted state was supported by Davy: the statement that the gas destroys by narcotic exhaustion was doubtfully suggested by Priestley, and openly by Broughton. For years this view of the question has been the one most commonly taught in this country.

The last conclusion that had been drawn from experiment relative to the effects of oxygen was, that it has no influence on life. Lavoisier, in his later experiments, seems to have drawn this inference, and Regnault has greatly confirmed it.

In 1852, with these conflicting data before him—those of Regnault only excepted—Dr. RICHARDSON commenced an inquiry into the whole subject, which he had continued, with intermissions, to the present time. The author here narrated his earlier experiments, from which he came to the conclusion that animals of active respiration, as dogs, cats, and pigeons, on being subjected to a constant stream of freshly made oxygen, became subject to inflammation, owing to the rapid destruction of the tissues—hypercausis. In further experiments, he found, however, that this rule was not common to all animals; for rabbits and frogs were kept by him even for weeks in oxygen without apparent injury. On the data, therefore, he gave the following as the first major proposition of his paper:—

The influence of pure oxygen, as an excitant, differs according to the animal; being most marked in animals of quick respiration and high temperature; and least marked or *nil* in those of feeble respiration and lower temperature.

Up to 1856, the author had felt assured that oxygen, when it destroys life in the actively breathing animals, does so by causing a too rapid oxidation of tissue and the so-called inflammatory process; and he believed that the symptoms of narcotism and paralysis, named by Broughton, were due without doubt to one or other of two possible errors, introduction of carbonic acid, or modifications of the air-pressure exerted on the animal. In 1857, he began to suspect that his view was not strictly correct; but he had no proof either one way or the other until the present year, when a new observation opened a new phase of the question. Having made on one occasion forty gallons of oxygen, and having, by the side of the reservoir containing the oxygen, another reservoir of equal size filled with water, Dr. Richardson determined, in order to economise both

labour and material, to collect the oxygen from the supplying reservoir, after it had passed through the chamber containing the animals. He arranged also to wash the oxygen in alkaline solution until it was free of carbonic acid altogether; to pass it over sulphuric acid to remove any ammonia; and finally to charge the second reservoir with it and to use it again, sending it thus backwards and forwards from one reservoir to the other until it was all used.

When the apparatus was complete, he placed four warm-blooded animals, a cat, a dog, a pigeon, and a rabbit, with two frogs, in a large chamber; and, at 11 o'clock in the morning, commenced the transference of the oxygen, passing it through the chambers at the rate of 2000 cubic inches per hour. In six hours, the whole of the primitive oxygen, *minus* nearly 1000 cubic inches which had been lost in respiration, was transferred into the second reservoir. The gas was now tested, and, having been found to give no reaction to lime water, it was driven back through the chamber and washed again thoroughly with potash, to be received once more into the reservoir number one. As the first charge of oxygen was passing through the chamber, there were exhibited no signs different from those of excitement, which had before been seen; but, as the second charge passed through, all the animals became depressed and drowsy. After an interval of four hours, the current was again changed, and the oxygen, purified most carefully of extraneous matter, was a third time given to the animals. It now became more obvious that every animal was under some peculiar depressing influence; even the rabbit did not escape. The symptoms were entirely different from those arising from carbonic acid. The breathing was quick, but easy and tranquil. There was not the slightest approach to convulsion. The pigeon buried its head under its wing, and simply drooped and slept. The four-footed animals sat with their fore-legs straight and their heads between them, nodding as if in profound and pleasant sleep; they were aroused with difficulty, and fell off again in an instant. Then the fore-legs slowly gave way forwards as if paralysed; and, before the third charge of the oxygen was three parts over, the pigeon was dead, and the kitten was so nearly dead that it was not easy to detect its chest-movements: the dog gave no sign of sensibility, but breathed softly: the rabbit was fast asleep. The frogs alone were unaffected.

At this crisis, a little air was pumped out of the chamber through lime-water; it gave less indication of carbonic acid than the common air which the experimentalist was breathing. The animals were then removed, and a lighted taper was placed in the chamber. The taper burned with more brilliancy than in the air, but with a slight yellowness of flame.

The animals were all nearly dead. The kitten died a few minutes after removal; the rabbit recovered in two hours; the dog seemed paralysed in the limbs for the greater part of the day, but recovered. When the bodies of the pigeon and the kitten were opened, there was found no indication of asphyxia. The lungs were inflated and red; the heart contained blood on both sides, but the blood in each side was of the same hue, neither being very dark; the brain was bloodless; the other organs were natural. The appearances in the pigeon corresponded with these with the most minute accuracy.

Dr. Richardson next narrated the histories of several other experiments, from which he derived, apparently to demonstration, the following and second major proposition:—

Oxygen, when breathed over and over again, although freed entirely from carbonic acid or other known products of respiration, loses its power of supporting life; the process of life ceasing, not from the introduction of a poison, but by a negation, or a withdrawal of some principle extant in the primitive oxygen, which is essential to life.

The last section of the paper had reference to the influence of oxygen on muscular irritability; and various experiments were again given. On them the author founded the third major proposition:—

Oxygen, while it is essential to muscular irritability and muscular power, exerts its influence over muscle, not as a direct excitant of muscular contraction, but by supplying to the muscle an agent or force by which the muscle is fitted for contraction on the application of an exciting cause.

THE PHYSIOLOGICAL RELATIONS OF THE COLOURING MATTER OF BILE. BY J. L. W. THUDICHUM, M.D.

The author said that, having made various attempts to determine by elementary analysis the composition of cholochrome (colouring matter of bile), he had convinced himself that the ordinary method of purifying that substance did not yield a uniform material. He therefore searched for a reaction which would furnish the key to the rational composition of cholochrome, in order to establish its formula by metamorphoses. Such a reaction was obtained with nitrous acid, which, when passed in the gaseous state into water, alcohol, or ether, containing cholochrome in suspension in a finely divided state, decomposed the colouring matter under effervescence and great frothing, which was due to the evolution of nitrogen. There remained in the vessel a new acid, cholochromic acid, which was insoluble in water, soluble in alcohol, ether, and chloroform, but very changeable on exposure to air. It crystallised in dark red rhombic octohedra, when its solution in chloroform was evaporated in a current of hydrogen or coal-gas, and the crystals very much resembled hæmatoidine. The author thought that the hæmatoidine which Valentiner and Brücke had extracted from gall-stones and ox-bile might perhaps be identical with this new acid. From this reaction, it was evident that cholochrome, like the other acids of the bile, like hippuric acid, leucine, tyrosine, and many other substances connected with the human economy in health or disease, was an *amido-acid;* that is to say, an acid in which the nitrogen was contained in the form of amide (NH^2), this radical replacing one equivalent of hydrogen in a hypothetical acid, of which cholochromic acid was the oxy-acid; the radical (NH^2) of the amido-acid being replaced by peroxide of hydrogen (HO^2) in the oxy-acid.

With nitric acid, cholochrome yielded an amorphous yellow substance, little soluble in water—nitro-cholochrome; a crystallisable acid, easily soluble in alcohol—perhaps nitrocholic acid; and a colourless syrupy acid, easily soluble in water, and yielding a crystallised salt with ammonia—perhaps cholesteric acid, or a homologue.

Chlorine transformed the brown matter, cholophæine, into the green, cholochlorine, in the space of a few minutes. The process of Heintz required several weeks for effecting the same transformation. The continued influence of chlorine served to produce red cholochromic acid, which existed, however, only for a moment, being transformed into white chlorocholic acid, little soluble in water, more soluble in alcohol.

Dr. Thudichum had undertaken these researches (the extent of which, he regretted, was limited by the great difficulty of obtaining material, particularly gall-stones) partially with a view of ascertaining the nature of the pathological process which gave rise to the casts of the biliary ducts, described by him in the British Medical Journal. He had no doubt it was a process closely resembling the putrefaction of bile in a stoppered bottle, as he would show on a future occasion. If the process was acute, it constituted "biliosity or biliousness"; if more chronic, it gave rise to casts of the ducts and gall-stones; if the process extended to the liver-cells, it constituted malignant jaundice.

He further intimated that, the above reaction with nitrous acid being ascertained, the therapeutic effects of nitric and nitro-hydrochloric acid in a variety of forms of jaundice, which were already recognised by many practitioners, were deserving of further investigation and trial. His own experience was much in favour of these remedies.

Editor's Letter Box.

MR. DANIELL ON THE PRINCIPLE OF MUTUAL RELIEF IN THE MEDICAL PROFESSION.

Letter from T. Herbert Barker, M.D.

Sir,—It is seldom that after-dinner speeches are of sufficient importance to find a place in our Journal. An exceptional and unexceptionable piece of extempore eloquence, however, was delivered on the 15th June, by our old friend and associate Mr. Daniell, after the annual dinner of the South Midland Branch. This was in response to the toast—"Success to the Royal Medical Benevolent College, and to the Medical Benevolent Fund."

It is in contemplation to make a vigorous effort to resuscitate, on a minor scale, the grand cooperative scheme which was propounded some years ago by that gentleman. Will you, therefore, do me the favour to make an exception to your generally good rule, and to insert the accompanying mere *outline* of Mr. Daniell's very excellent speech; and God grant that it may induce some hearty fellow-workers to join in promoting a plan

whereby the independence and dignity of our noble profession may be enhanced. I am, etc.,

T. HERBERT BARKER.

Bedford, July 6th, 1860.

"GENTLEMEN,—It has generally fallen to my lot to respond to this toast; and although our excellent President is the Honorary Local Secretary, for this neighbourhood, to the Royal Medical Benevolent College, yet, on my last visit to Bedford, this office of responding, which should have been his, became mine. I may, however, pardon him on this occasion; for wearing as he does the presidential crown, we could hardly ask his majesty to doff it, and take upon himself a subordinate office, which may so well be supplied by any of his subjects.

"As regards the Benevolent Fund of the Association, it is just one of those valuable appendages of a purely charitable character which ought to attach itself to every institution, as a ready means of meeting the temporary wants of the needy and distressed. I know that it has done much good; that it is still doing good; and that it will in the end confer real blessings—blessings which come like rain on the arid waste, refreshing and invigorating what otherwise might wither away and perish.

"The Royal Medical Benevolent College was a beautiful experiment, and its success should gladden the heart of every truly benevolent mind. The indomitable perseverance of Mr. Propert is worthy of all praise. I have said before, and I repeat it, that there is not a man in England who could have carried out this glorious project with more zeal and energy than my friend, Mr. Propert,—and to him let all honour be given. But, for all this, I am bound to say, its powers are too limited, its area too circumscribed, its resources inadequate, to meet the wants of a profession like ours—a profession exposed as it is to all the contingencies which tend to shorten life, to mental and bodily labour, and the remuneration for which fails, in the event of death, to make due provision for those whom we leave behind—our beloved wives and children. There is, however, another question which has always pressed heavily upon my mind—a question, I humbly opine, of vital importance as it regards the dignity and proper pride which ought to characterise a noble calling like our own. Far be it from me to repudiate charity in its holy and heavenly acceptation; but charity is simply a casualty upon which men in their upward struggles, and failure in the great battle of life, may be suffered to *lean*, never a principle upon which they are privileged to *fall*.

"He who receives an unwanted gift sacrifices his independence; he who gathers what he has not sown can scarcely be considered honest. One of our writers says, 'Every treatise on ethics speaks of the nobleness of *giving*, none of the *ignominy* of *receiving*.' And one of the keenest and most talented of our living authors proves that charity, as a dependence, has a fearfully demoralising influence upon the character of every nation. Thus in England people are born for nothing, nursed for nothing, educated for nothing, placed out in life for nothing—and so used are they to have everything provided for them in the first stages of existence, that no wonder in the end if they are *good for nothing*. Society is a vast and mighty chain, every link of which has its own given weight and pressure. Whether we take it at its upper, or its lower, or its middle, no matter; to make it compact, firm, and incapable of yielding, the pressure must be equal throughout; each is dependent on the other. Would you weaken any of these links? would you render inefficient even the lowest? Beware then how you rob even the labourer of his self-esteem; the tiller of the earth of his natural independence; for mark, in the words of the American poet, there is a 'nobility in labour'; there is also 'a long pedigree in toil'.

"Gentlemen, it was the aim of the best portion of my life to infuse these principles into the minds of my professional brethren. I refer you to the medical journals for 1845 to 1852, and you will find them teeming with appeals from me in favour of a cooperating institution, the object of which was to render the great body of the profession independent of making claims on charity, but self-reliant; seeking, as a just right, that which is now sought by humiliating appeals to benevolent institutions.

"I confess that my aim was to establish a gigantic institution. I sought to raise a sun within the cycle of the professional hemisphere, that it might pour its beautiful beams upon every nook and corner in the British dominions; that its invigorating influence might be felt under every phase of difficulty which disease or death might inflict. I was obviously born before my time; the hour is not come when the value of such a scheme has become patent to the minds of my brethren. But the hour will come, and my labours will be understood, valued, and acted upon; but it may be not until the head that planned the scheme is laid low, and the heart which throbbed in anticipation of a happy fulfilment of its ardent aspiration has become 'a clod of the valley'.

"It has been suggested to me that, if I failed in establishing this great institution, I might be instrumental in furthering a society on a smaller scale. It has been thought that an institution in connection with the South Midland Branch might be founded, on analogous principles to those which have long existed in Kent, Surrey, Yorkshire, and the metropolis. These are cooperative institutions; those only receive who contribute. Like ordinary friendly societies, they are founded to meet the contingencies to which all men are liable, and to provide help to the widow and the orphan.

"What I should suggest to you would go beyond this. I should propose aid in the event of sickness or accident. But the 'Rules of the British Medical Fund' would furnish you with ample material to meet the project. These I shall be happy to lay before you. Only let me say, Be earnest in what you do! Do not put your hand to the plough, if your design is to pause in your efforts to turn up the soil!

"I address more especially my younger brethren. Let them remember that, however brilliant the day may be, the night must come; and clouds sometimes darken the fairest sky. Be up, then, and doing; and, although time has somewhat lessened my power to do, every possible energy of mine is at your service; and if God gives me the privilege to live to see your exertions crowned with success, I shall feel and be thankful to the Giver of all good that I have, after all, not lived and laboured in vain."

POOR-LAW MEDICAL REFORM.

LETTER FROM RICHARD GRIFFIN, ESQ.

SIR,—I shall feel obliged by your affording me space in your JOURNAL to inform the Poor-law medical officers that, since the withdrawal of the Bill on Poor law Medical Relief, I have been in frequent communication with Mr. Pigott and the Poor-law Board; and I regret to say there is no hope of any assistance from the latter, as red-tapism reigns paramount, and does not like reform.

I had a long interview with Mr. Pigott last Friday in London, and went through every clause in the proposed Bill. We decided to expunge the Coroners' Clause, and also that relative to sanitary measures; as a Bill on the former subject is now before the House, and we thought it better for the present to leave the health of the community with the Local Boards of Health and the Guardians, and see the working of the Bill just passed the Commons, entitled "Nuisance Removal and Disease Prevention Bill".

The payment clauses in the proposed Bill will doubtless be severely criticised by those gentlemen who will not gain by them; but I have inserted a clause to exempt all present medical officers, who desire it, from coming under its operation, and thus leave them in the enjoyment of their present salaries. To attempt to raise all men to the highest standard now enjoyed, would be to ensure a certain rejection of the Bill; and therefore I have limited myself to asking for that only which we have a reasonable right to expect will be conceded to us. On trying a variety of modes of calculation, I find that the only one that works fairly is that now proposed; viz., five shillings per case up to the first three hundred in number, above which two shillings per case only should be paid. In addition to this, a further sum, to be called mileage, is to be paid for all patients requiring to be visited at their own homes; and, in order to ensure a uniform rate of payment for all the patients in each district, the same mileage shall be paid for each, whether the patient lives next door to the medical officer or at the furthest extremity of a district. Thus, if the farthest inhabited house in a district be four miles from the residence of a medical man, then two shillings per case for mileage shall be paid on all those requiring to be visited at their own homes. The medical officer of a workhouse will be paid for his patients on the same plan; but, instead of mileage for each case in the workhouse, he will have one shilling per mile for each visit to the workhouse. All visits under one mile to be reckoned as one mile, etc., etc. The extra medical fees are left, as in the last Bill, to be arranged by the Medical Council and Poor-law Board.

I have now before me the calculations of nearly all the unions in England and Wales; and I hope in a short time to complete

the rest. These I desire to lay before the members of Parliament in the form of a pamphlet, and thus show the entire working of the proposed system; but it will depend on the profession whether I am to do this or not. At present, I have but a few pounds in hand, and must leave the Bill to its fate unless medical men will come forward speedily and give me the means to set the printers at work. A favourable impression, I am assured, has been made on Parliament; and I know that we have in Mr. Pigott a zealous advocate of the cause. He works well for the medical men, because he knows that in so doing he will benefit the poor; and what is for their welfare he feels assured is for the benefit of the ratepayer: and the time will come when the guardians will view the subject in the same light.

In the hope of inducing the Poor-law Board to see the necessity of aiding us in the much needed reform, I sent them a summary of the calculations of the present and proposed payment in each union in five whole divisions of the kingdom, with also separate calculations of each medical officer's salary in two hundred and nine unions scattered through the divisions. Hoping the tediousness of looking over these papers might be a little relieved by a few foot-notes, I appended several.

Before this is in print, I hope you will have seen by the daily papers that the Bill has been introduced; if not, it doubtless will be before long; but it has to be put into legal form, which may delay it a short time. The expense of this will, I fear, leave me penniless. I am, etc.,

RICHARD GRIFFIN.

12, Royal Terrace, Weymouth, July 9th, 1860.

P.S. As soon as the medical officers see the Bill is introduced into the House, I hope they will petition in its favour, and do all they can with their members.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of daughters, the wives of—

CURRIE, Samuel, M.D., Deputy-Inspector-General of Hospitals, at Queen's Terrace, Bayswater, on July 6.

DAVIES, Herbert, M.D., Finsbury Circus, on July 5.

NEWHAM, Thomas, M.D., Winslow, on July 6.

MARRIAGES.

ALLINSON, John, Esq., Surgeon, Spital Square, to Annie C., eldest daughter of S. FARNFIELD, Esq., of Woolwich, at Lee, on July 4.

CROSSFIELD, A., Esq., Solicitor, Hackney Road, to Miranda E., youngest surviving daughter of Wm. G. KING, L.R.C.P.Ed., of South Hackney, on July 5.

KENNY, the Rev. Lavis S., rector of Kirby Knowle, Yorkshire, second son of *M. S. Kenny, M.D., of Halifax, to Arabella E. M., eldest daughter of Lieut.-Col. H. WALKER, of Wellesley House, Kent, at Plumstead, on July 5.

MONYPENNY, P. Howard, Esq., to Emma M., fourth daughter of *John McMUNN, M.D., of Dublin, on July 5.

ROBERTS, David, M.D., to Miss Elizabeth Ann HARMER, at Christchurch, Marylebone, on June 29.

SMITH, Robert, M.D., Sedgefield, Durham, to Jane M., eldest daughter of the Very Reverend P. C. CAMPBELL, D.D., Principal of University and King's College, Aberdeen, on June 27.

WARD, Thomas M., Esq., Surgeon, of Exmouth, to Mary, second daughter of the late John LOVEGROVE, Esq., of Gloucester, on July 4.

DEATHS.

O'BRIEN, Thomas, M.D., late of the General Hospital at Calcutta, lately.

TORR, Thomas B., Esq., Surgeon, Barnstaple, aged 54, on June 29.

VAN OVEN, Barnard, M.D., at 32, Manchester Square, aged 63, on July 9.

PASS LISTS.

APOTHECARIES' HALL. LICENTIATES admitted on *Thursday, July 5th*, 1860:—

BLACKMAN, Matthew, M.R.C.S., Ramsgate
BUSH, Danvers W., Weston, near Bath
STRICKLAND, Edward, Kirby Moorside
TRUMAN, Edgar B., Nottingham

The following gentlemen also, on the same day, passed their first examination:—

ARMSTRONG, S., Woodbridge
BUCKMASTER, Chas. A., King's College
EDYE, Stonard, Exeter
ELLIS, Heber Dowling, St. Bartholomew's Hospital
ELWES, Chas. W., University College
FENN, E. B., Ardleigh, Essex
GRENFELL, H., King's College
LONGWORTHY, William F., St. Bartholomew's Hospital
MARTIN, Thomas, Manchester School of Medicine
MURRELL, William H. J., St. Bartholomew's Hospital
SHAPLAND, John D., University College
SMITH, Thomas S., University College
STEPHENSON, William, St. Bartholomew's Hospital
SUTCLIFFE, Henry, University College

DR. ACLAND, of Oxford, has sailed for Canada as medical attendant to his Royal Highness the Prince of Wales, during his visit to that country.

SURGERY IN THE IONIAN ISLANDS. Mr. W. T. Harding, Staff Assistant-Surgeon, writing to the *Dublin Medical Press* from Cerigo, gives the following curious account of an operation which lately came under his notice:—"About a week ago, I was in company with another officer spending a day at the Convent of Myrtidiæ (a church situated at the northern point of this island, and remarkable no less for the beauty of its architecture than for being the situation where it is believed by the Greeks the image of the Virgin and Child were discovered); suddenly, our attention was attracted by the sounds of screams which proceeded from one of the cells beneath, and, on inquiring the cause, I was informed that an old woman, aged 75, had been bitten by a small black spider, called by the people here 'the Rena', the effects of which produce violent inflammation, and sometimes mortification. The *native professor* immediately caused a large oven to be lighted, and when sufficiently heated, the old woman was tied on a board and put into it. After the lapse of about five minutes, she was taken out by means of a long shovel (similar to those used by bakers in withdrawing their loaves); in a minute or two, she was again put in, and this process was repeated seven times, the entire operation occupying about forty minutes. She was then brought out, wrapped up in blankets, and put into a warm room. Profuse perspiration immediately covered the entire surface of the body, and this lasted for more than a couple of hours. Before my leaving the place in the evening, I again saw her, when she said she felt quite well, but a little weak—the effects, no doubt, of the residence in her caloric apartment."

HEALTH OF LONDON—JULY 7TH, 1860.

[*From the Registrar-General's Report.*]

	Births.	Deaths.
During week ..... Boys.. 879 Girls.. 788	1667	919
Average of corresponding weeks 1850-9	1467	1115

Among the causes of death were—bronchitis, 24; pneumonia, 28; phthisis, 144; small-pox, 17; scarlatina, 33; measles, 46; diphtheria, 3; hooping-cough, 27. The deaths from pulmonary diseases (exclusive of phthisis) were 90, being 13 below the corrected average.

Barometer:
Highest (Mon.) 30·234; lowest (Wed.) 30·019; mean 30·126.

Thermometer:
In sun—highest (Th.) 123·0 degrees; lowest (Wed.) 102·0 degrees.
In shade—highest (Th.) 73·3 degrees; lowest (Th.) 41·6 degrees.
Mean—58·5 degrees; difference from mean of 43 yrs.—3·0 degrees.
Range—during week, 31·7 degrees; mean daily, 21·9 degrees.

Mean humidity of air (*saturation* = 100), 82.
Mean direction of wind, N.W.—Rain in inches, 0·00.

TO CORRESPONDENTS.

Members should remember that corrections for the current week's JOURNAL should not arrive later than Wednesday.

Communications have been received from:—DR. LIONEL BEALE; MR. T. W. NUNN; MR. TAMPLIN; DR. T. SKINNER; MR. R. FAIRCLOTH; DR. B. CHEVALLIER; DR. A. T. H. WATERS; MR. RD. GRIFFIN; DR. T. INMAN; MR. W. DEANS; DR. G. WYSE; DR. LAWFORD; AN OBSERVER; DR. E. SMITH; DR. GIBB; MR. A. E. DURHAM; DR. C. B. RADCLIFFE; DR. B. W. RICHARDSON; DR. THUDICHUM; DR. P. H. WILLIAMS; VICTOR; DR. T. H. BARKER; MR. H. WALTON; MR. P. C. PRICE; DR. GUY; MR. C. MAYO; DR. J. H. CORBETT; DR. M. FOSTER; and MR. J. F. NICHOLSON.